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TRANSFUSION TREATMENT OF SHOCK DUE TO MYOCARDIAL INFARCTION*

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BOSTON

THE pathogenesis and treatment of the vascular collapse often attending myocardial infarction have perplexed investigators for many years. Particularly vigorous in recent years has been the debate over the safety and efficacy of treatment with transfusions of blood or plasma. Although a few case reports of such treatment have appeared in the literature[1, 2] and many opinions have been given pro[3-5] and con,[6-8] no series of cases has yet been published.

At the New Haven Hospital transfusion of patients in shock after myocardial infarction has both advocates and opponents. During the past six years some of these patients have been given only the usual nonspecific supportive measures, without vasopressor or stimulant drugs, and others have received infusions of blood or plasma. The records of both groups have been reviewed in an attempt to evaluate therapy with transfusion and to form a clearer picture of the natural history of shock due to coronary occlusion.

METHODS AND MATERIALS

The records of all patients given the diagnosis of myocardial infarction since 1943 were studied. Only those with unequivocal clinical and electrocardiographic evidence of recent infarction, or those with autopsy proof of infarction, were selected for this report.

For the purposes of this study, a patient was considered to be in shock whenever the systolic blood pressure remained below 90 for at least an hour, during which the classic signs of peripheral vascular collapse (weakness or stupor, cyanosis and cold, moist skin) were present. The large group with the appearance of shock but with systolic blood pressures above 90 was not studied, even when the arterial pressure was considerably below its usual level. A few patients who looked well, although their systolic blood pressures were below 90, were not considered to be in shock. This distinction seemed to be justified by the fact that such patients uniformly did well, whereas, as shown below, the mortality was very high among patients with the signs of vascular collapse as well as hypotension.

Tests for statistical significance were those described in Snedecor's[9] textbook.

RESULTS

From January, 1943, to January, 1949, 325 patients with unequivocal myocardial infarction were seen in the New Haven Hospital. Some of the characteristics of the entire group are presented in Table 1 and are compared with those reported in three recent reviews.[10-12] It can be seen that our patients resemble those in other series in their average age, sex distribution and the incidence of diabetes and previous hypertension. Thirty-eight per cent of 120 patients selected at random showed signs of congestive heart failure. It is impossible to compare this figure with that given by other authors since the criteria for this diagnosis are not uniform. In this series, patients were considered to be in heart failure whenever they had persistent basal rales, peripheral edema or venous distention and hepatomegaly. The over-all mortality in the present group, 44 per cent, was somewhat higher than that reported by others. This may reflect the stringency of our criteria for the diagnosis of myocardial infarction, which resulted in the elimination of all doubtful, and often less serious, cases from the study.

In confirmation of many previous observations, it was found that patients with diabetes‡ or congestive failure had a much higher mortality than the group as a whole, whereas previous hypertension did not seem to affect the prognosis. Patients over seventy years of age had a significantly higher death rate than younger patients. The mortality was significantly higher in females than in males. This was noted previously by Mintz and Katz,[10] but not by Master and his associates[11] or by Rosenbaum and Levine.[12] Closer examination of our data revealed that the higher mortality among women

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‡Only one diabetic patient was in acidosis. This patient was also in shock. The disease in all other diabetic cases in this series was well controlled.

was apparently due to the greater age of our female patients and their higher incidence of diabetes. There was no significant difference in the mortality of the two sexes when only nondiabetic patients or diabetic patients in the same age group were compared.

Fifty patients, or 15 per cent of the series, satisfied the arbitrary criteria for shock outlined above. This figure is not comparable with those in the other series because no precise definition of shock is given by their authors. The mortality in this group was 88 per cent — more than twice that of the other patients not in shock. Thirty of the patients in shock were given transfusions of blood or plasma, and the remaining 20 were not. Table 2 compares certain features of the patients in shock with those not in shock and also compares the 30 patients receiving transfusions with the 20 treated by more conventional methods.

Patients in shock had essentially the same age and sex distributions and the same incidence of previous hypertension as those not in shock. However, they had twice the incidence of diabetes and of congestive failure. The patients in shock had a significantly higher average white-cell count and lower temperature than the rest of the series.*

*The highest white-cell count and the highest temperature occurring during the first three days of hospitalization were recorded. Temperatures were usually taken by rectum, but sometimes (and perhaps more often in the sickest patients) by mouth.

The average age and the incidence of previous hypertension in the patients in shock who received transfusions resembled those in patients in shock who did not get blood or plasma. As judged by the frequency of congestive failure, recurrence of pain after admission, occurrence of arrhythmia or intraventricular block and the average white-cell count and average temperature, the two groups did not differ significantly in the severity of the myocardial insult. Their selection differed strikingly in that all diabetic patients in shock were given transfusions, comprising nearly half the transfusions. This factor must be considered when the results in the patients receiving transfusions are compared with their "controls" because the presence of diabetes (even though regulated) carried an extremely high mortality regardless of the presence of shock.

From the 20 patients who went into shock and were not given transfusions it was possible to form a picture of the natural history of the shock of myocardial infarction under the usual treatment. Table 3 summarizes the clinical course in the two groups.

At any time up to 12 days after the onset of chest pain (but within twenty-four hours in three quarters of the cases), the patients who were not given transfusions exhibited the signs and symptoms of peripheral vascular collapse. Five patients (25 per cent) improved after two hours to three days of

TABLE 1. *Incidence of Some Clinical Features in Patients with Coronary Occlusion and Their Effect on Mortality.*

AUTHOR	NO. OF CASES	PROPORTION OF MEN TO WOMEN	AVERAGE AGE	INCIDENCE OF DIABETES	INCIDENCE OF HYPERTENSION	INCIDENCE OF CONGESTIVE FAILURE
		%	yr.	%	%	%
Epstein and Relman	325	68:32	61	15	48	38†
Mintz and Katz[10]	572	68:32	60	16	36	23
Master et al.[11]	500	77:23	55	11	62	51
Rosenbaum and Levine[12]	208	69:31	59	—	57	70

*"Shock" not defined by other authors.
†120 cases at random.

TABLE 2. *Data on Patients with and without Shock.*

TYPE OF CASE	NO. OF CASES	AVERAGE AGE	RATIO OF MEN TO WOMEN	MORTALITY	INCIDENCE OF HYPERTENSION	INCIDENCE OF DIABETES	INCIDENCE OF CONGESTIVE FAILURE	HIGHEST WHITE-CELL COUNT	HIGHEST TEMPERATURE	INCIDENCE OF RECURRENT PAIN	INCIDENCE OF ARRHYTHMIA
		yr.	%	%	%	%	%	x10³	°F.	%	%
Patients in shock:											
Transfusion* given	30	62	63:37	90	43	47	70	18.05	100.0	40	67
No transfusion given	20	61	75:25	85	50	0	65	17.58	100.5	35	65
Total	50										
Averages		62	68:32	88	46	28	68	17.80	100.2	—	—
Patients without shock	275	61†	71:29†	35	49†	14	38‡	14.40	100.9	—	—

*There were no significant differences between patients who received transfusions and those who did not, except for the incidence of diabetes.
†No statistically significant difference.
‡120 cases at random.

hypotension (average, seven hours). Two of these died suddenly, two and three days after emerging from shock, and 3 patients survived. Fifteen patients (75 per cent) died without improvement after one hour to four days in shock (average, nineteen hours); two thirds of these (10 patients) died within twelve hours.

When shock was first noted, 11 (55 per cent) of the 20 patients who were not given transfusions, in 4 and improved in 3. Signs of failure followed transfusion in 2 other cases. At the onset of shock, 7 patients who improved had congestive failure, which, coincident with transfusion, increased in 3, and improved in 2, who were also given digitalis. After receipt of 300 cc. of plasma in twenty minutes, transient pulmonary edema developed in another patient. Twelve of the 19 patients unimproved by transfusion were in congestive failure at the

TABLE 1 (*Continued*).

INCIDENCE OF SHOCK*	MORTALITY						
	TOTAL	MEN	WOMEN	DIABETIC PATIENTS	HYPERTENSIVE PATIENTS	PATIENTS WITH CONGESTIVE FAILURE	PATIENTS WITH SHOCK
%	%	%	%	%	%	%	%
15	44	39	55	73	46	65	88
7	22	19	29	33	23	43	78
53	29	28	32	39	29	—	—
54	33	31	35	—	36	42	44

including 2 of the 3 who survived, showed signs of congestive heart failure, usually left sided. Nine of the 15 patients who died without improvement had congestive failure at this time, which improved in 1 and became worse in another. In another case pulmonary edema occurred after the onset of shock. In still another patient, who improved, signs of congestive failure appeared and increased temporarily before the patient recovered.

The course of events was not very different in the 30 patients who received transfusions. An average of 700 cc. of blood or plasma was usually started three or four hours after the appearance of shock and given at the rate of 250 cc. per hour. Eleven of the thirty patients (37 per cent) rallied within three or four hours of the beginning of the transfusion, with an increase in systolic pressure of 10 to 60 and an improvement in general condition usually lasting until death or discharge. Eight of these patients died two hours to six days after emerging from shock. In 2 cases the blood pressure fell again to shock levels for a few hours before death; severe congestive failure and auricular fibrillation, with a rapid ventricular rate, developed in 1, another patient suffered a rupture of the myocardium, and 4 died suddenly of unknown cause. Three patients continued to improve, 2 after repeated transfusions, and were discharged well. Nineteen cases were not improved by transfusions. The average survival after the beginning of shock in this group was sixteen hours. This was similar to the course of patients in the "control" group who did not improve spontaneously.

When transfusion was started, 19 patients (63 per cent) had congestive failure, which increased onset of shock. In only one of these did the signs of failure increase. Heart failure occurred only after transfusion in another patient, who died in shock and pulmonary edema.

As shown in Figure 1, more blood or plasma was given to patients who improved than to those who did not improve; however, some of the largest transfusions were not followed by improvement.

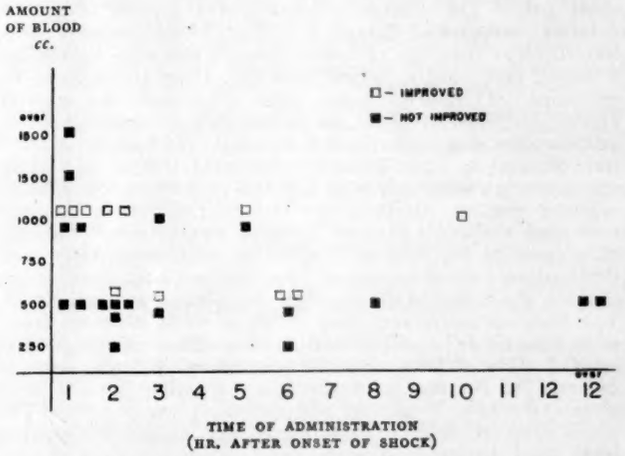

FIGURE 1. *Relation of the Amount of Blood Given and the Time of Administration to Improvement in Shock.*

There seemed to be no relation between the presence of congestive failure and the likelihood of improvement in shock with transfusion (Table 3). Fifteen of 19 patients with congestive failure at the onset of shock had no increase in failure with transfusion. Indeed, congestive failure increased almost as often in patients who were not given transfusions (15 per cent) as in those receiving transfusions (20 per cent).

In summary, from a purely statistical comparison of two small groups, no benefit from transfusion could be demonstrated. These figures are weighted by the fact that nearly half the patients receiving transfusions had diabetes, and presumably a worse initial prognosis than those not transfused, none of whom had diabetes. However, in this condition, in which every case is unique and the natural mortality very high, statistical summaries may be less informative than a careful study of individual cases. Despite the statistical similarity between the transfused and "control" groups, transfusion seemed to be responsible for the clinical improvement in some patients. The following case reports are representative of 11 cases in which transfusion was accompanied by improvement in the shock syndrome.

TABLE 3. *Clinical Course of Patients in Shock.*

GROUP	NO. OF CASES	DEATHS	IMPROVEMENT IN SHOCK			NO IMPROVEMENT IN SHOCK			FAILURE INCREASED
			PATIENTS WITH HEART FAILURE*	PATIENTS WITHOUT HEART FAILURE	TOTALS	PATIENTS WITH HEART FAILURE	PATIENTS WITHOUT HEART FAILURE	TOTALS	
Patients receiving transfusions	30	27 (90%)	8	3	11 (37%)	13	6	19 (63%)	6 (20%)
Patients not receiving transfusions	20	17 (85%)	3	2	5 (25%)	10	5	15 (75%)	3 (15%)

*Congestive heart failure at any time after onset of shock.

A. M. (B60512), a 57-year-old man with hypertension, mild heart failure and one previous myocardial infarction, was admitted to the hospital after several hours of agonizing chest pain. The electrocardiogram was typical of recent anterior myocardial infarction. The blood pressure was 100/70. The first day of hospitalization was complicated by a nodal tachycardia, which subsided after large doses of quinidine. Thirty-two hours after admission, the arterial pressure dropped to 80/60, the patient became semistuporous, and his skin was cyanotic and clammy. He had not voided since admission. After 4 hours in this state, 1000 cc. of plasma was given intravenously over a period of 2 hours. The blood pressure rose to 90/70. Even though the venous pressure rose from the equivalent of 210 mm. to 340 mm. of water, there was no increase in dyspnea or pulmonary rales, and the patient looked improved. Six hundred cubic centimeters of urine was obtained shortly after the infusion was completed. The blood pressure remained at 90/70 until 16 hours later, when it again fell to 80/60 and another 500 cc. of plasma was infused. The venous pressure rose from the equivalent of 240 mm. to 300 mm. of water, but the patient seemed more alert and was able to void adequate amounts of urine. The blood pressure rose to 105/70 and was maintained at that level until discharge, 4 weeks later, when the signs of congestive failure had cleared.

A. I. (A57425), a 50-year-old diabetic man with hypertension and polycythemia, who had suffered a previous myocardial infarction, was admitted because of increasing dyspnea of 1 week's and vomiting of 1 day's duration. The arterial pressure was 150/120. He was digitalized because rales were present at the lung bases. Eighteen hours after admission severe, squeezing pain in the anterior portion of the chest developed, his blood pressure dropped to 80/40, and his extremities became cold and clammy. The concentration of glucose in the blood was not determined at this time, but hypoglycemia was considered unlikely because he had been given only 15 units of crystalline insulin 16 hours previously, and this had been followed by an infusion of glucose solution. The situation had not changed 3 hours later, when an infusion was started. A liter of whole blood, a liter of 10 per cent glucose solution and 300 cc. of physiologic saline solution were administered over the next 12 hours. Four hours after the transfusion had begun, when 500 cc. of blood had been given, the blood pressure rose to 138/110. After the administration of another 500 cc. of blood it was 150/110, and the patient looked and felt better. There was no increase in dyspnea or pulmonary rales. Four hours after the infusion had been stopped, the blood pressure began to drop again, and 3 hours later it was 100/86. Eight hours after transfusion had been stopped, the patient died. Autopsy confirmed the presence of a recent myocardial infarction.

DISCUSSION

Profound shock eventually results in widespread, irreversible disorganization of bodily function.[13] In the presence of recent myocardial infarction, shock is particularly pernicious because existing cardiac damage may be aggravated by further reduction of coronary blood flow.[14-16] Most authorities agree, therefore, that this situation calls for prompt measures aimed at raising arterial pressure.

When shock follows experimental coronary occlusion in dogs, cardiac output is usually lowered but often not in proportion to the changes in arterial pressure.[17, 18] By contrast with traumatic shock, the blood volume and central venous pressure are not reduced.[17, 18] The meager data available on the hemodynamic changes occurring in man also indicate that, although the cardiac output may be reduced, neither the blood volume nor the central venous pressure is low.[19] However, in some cases, there is evidence of peripheral venous collapse.[20, 21] Two cases of shock and congestive failure following myocardial infarction have been reported in which the cardiac output was within normal limits in the presence of an elevated filling pressure.[22, 23] Obviously, much more data of this sort is needed to clarify the mechanism of coronary shock in man.

Some authors[6, 24] argue that the most rational therapy is the use of cardiac stimulants and vasopressor drugs, but few cases of their successful employment have been reported.[2, 24] One might expect blood transfusions to be of value if this type of shock were associated with pooling of blood in the splanchnic vessels and diversion of the circulation from more vital areas. There is evidence that this does occur in experimental hemorrhagic shock

in dogs[25, 26] and in shock due to mechanical limitation of blood flow.[27]

Transfusion might improve the circulation if further elevation of an already high venous filling pressure could increase the output of an infarcted heart. It has been shown that this occurs in a dog's heart failing during post-hemorrhagic shock after replacement of blood volume, although such a heart is less capable of responding to a given increment in filling pressure than it was before hemorrhage.[28, 29] The blood pressures of 8 patients in this study rose during transfusion despite the presence of congestive failure. This suggests that some of these patients responded to augmented cardiac filling with an increase in cardiac output or peripheral resistance.

Many authors warn against transfusion of patients in shock when heart failure is present.[3, 30-32] In only 2 of 21 such cases did pulmonary edema follow transfusion, and in one of these the symptoms subsided within half an hour, and the blood pressure rose. Signs of heart failure increased among the control patients almost as often as they did in those given transfusions. These data therefore suggest that transfusions can be given with relative safety.

It should be emphasized, however, that most of our patients received smaller quantities of blood at slower rates than are usually necessary to treat hemorrhagic and traumatic shock. For this reason the present study is inconclusive. Although more vigorous therapy might have improved the results, it is also possible that pulmonary edema would have been a more frequent complication. A more definitive investigation should include detailed hemodynamic studies on patients treated with larger and more rapid infusions than those employed in the present report. That such an effort is feasible is suggested by the infrequent development of pulmonary edema after transfusion in this series.

Summary

Clinical observations on the effect of transfusions in 30 patients with shock following coronary occlusion are compared with the natural history of the disease in 20 patients not given transfusions.

Although transfusion seemed to be of benefit in a few cases there was no significant difference between the two groups in mortality and recovery from shock.

Transfusion did not seem to increase the incidence of pulmonary edema or the severity of congestive failure.

Shortly after this paper was submitted for publication, Sampson and Singer[33] reported their experience with small transfusions in the treatment of 11 cases of coronary shock. In spite of transient improvement in 8 cases only 1 patient survived his illness. Maximum improvement seemed to be dependent on early and fairly rapid transfusion. One patient with an initially high peripheral venous pressure died in pulmonary edema, but all others with congestive heart failure tolerated the transfusions well.

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B.C.G. TUBERCULIN AS A TESTING MATERIAL*

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WITHOUT going into a lengthy discussion on the significance of a positive skin reaction to tuberculin and its limitations, it is fair to state that few laboratory tests are as satisfactory and as widely used by the medical profession. Any additional contribution to the safety and efficiency of the test should be of value.

It is well known that the allergic response to tuberculoprotein, as indicated by the intensity of the reaction to tuberculin, varies in different persons. Thus, a given amount of tuberculin may elicit a mildly positive reaction in one subject and yet, in a more sensitive person, may cause a severe local reaction with vesiculation and necrosis, as well as constitutional symptoms such as malaise, chills and fever. The possibility, furthermore, of focal reactions with reactivation of a latent focus of tuberculosis, though very rare, must be kept in mind.

To avoid these severe reactions, it has been customary to start with a small initial dose, and, so that positive reactions in less sensitive persons will not be overlooked, this initial dose is followed by one or more tests with larger amounts of old tuberculin (O.T.) or purified protein derivative (P.P.D.). O.T., as is well known, is a steam-concentrated, glycerin-broth culture of human tubercle bacilli passed through a porcelain filter. P.P.D. is the heated protein of tubercle bacilli that has been precipitated from human tubercle bacilli cultured on protein-free mediums. The initial dose of O.T. is usually 0.1 cc. of a 1:1000 dilution (0.1 mg.). The second test is with 0.1 cc. of a 1:100 dilution (1.0 mg.). The dosages of P.P.D. as now marketed are as follows: first testing dose, 0.00002 mg., and second dose, 0.005 mg.

There is, however, an upper limit on the amount of tuberculin one can use. Smith et al.[1] carried out studies demonstrating that false-positive reactions, or "pseudoreactions," are obtained in as many as 15 per cent of cases when large doses (10 mg.) of O.T. are used. Some observers believe that any dose of O.T. over 1.0 mg. is unreliable because of the high incidence of false reactions. Furcolow et al.,[2] working with P.P.D., reported pseudoreactions in 50 per cent of cases when the usual second test dose (0.005 mg.) was used and the remarkably high figure of 96 per cent false reactions with the use of 1.0 mg. Vollmer[3] states that, even with the Patch test, pseudoreactions are more common when the concentration is increased.

It is obvious that the ideal tuberculin would be one that is free from severe positive reactions as well as pseudoreactions. In an effort to inhibit severe positive reactions, we tried antihistamine drugs[4] and found them to be unsatisfactory.

It then occurred to us that a tuberculin prepared from B.C.G. vaccine might be an improvement over previous tuberculins. The bacilli in B.C.G. vaccine are sufficiently attenuated to be nonpathogenic and yet have not lost their ability to convert nonreactors to positive reactors. It was therefore decided to study the efficiency of B.C.G. tuberculin as compared with commercial tuberculin.

MATERIALS AND METHODS

This study was carried out with children aged four to twelve years at the Prendergast Preventorium in Mattapan, Massachusetts. Dr. Konrad Birkhaug, of the Division of Laboratories and Research of the New York State Department of Health, kindly prepared and supplied us with B.C.G. and O.T. The latter was prepared on a 5 per cent glycerolated broth, whereas the B.C.G. tuberculin was produced from an eight-week-old culture of B.C.G. grown on Sauton's (protein-free) synthetic medium. The concentration of these two tuberculins, according to Dr. Birkhaug, was comparable.

The children were tested intracutaneously with similar amounts of both O.T. and B.C.G. tuberculin. The same location (midvolar surface of the left and right forearms) was used for all injections. Alternate arms were used for B.C.G. and O.T. on every other subject so as to avoid any possible difference in reactivity of the right and left arms. The reactions were read at intervals of twenty-four, forty-eight and seventy-two hours, and those showing an induration of 5 mm. or more in diameter at the end of forty-eight hours, in addition to varying amounts of erythema, were considered positive reactions. (This is a criterion for reading a positive test as recommended by the Massachusetts Department of Public Health.) The length and width of the indurations were measured with a millimeter rule. The product of these two measurements was considered as the area of the reaction and sufficiently accurate since the error would be approximately the same in all readings.

RESULTS

Of 91 children tested simultaneously with both 1:10,000 O.T. and 1:10,000 B.C.G. tuberculin, 43

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were positive with both testing materials, and 48 were negative with both agents. The positive reactions were much more severe with O.T. in all but 8 cases of the 43 (Table 1). These 8 cases showed an equally mild reaction on both arms. Vesiculation occurred in 6 cases with the use of O.T., whereas the opposite arm with B.C.G. showed a definite positive reaction but without severity or vesiculation.

The 48 negative reactors were retested with a 1:100 dilution of both tuberculins on opposite arms.

TABLE 1. *Comparative Intensity of Positive Tuberculin Reactions.*

SUBJECT	AREA OF REACTION WITH O.T. 1:10,000	AREA OF REACTION WITH B.C.G. 1:10,000
	sq. cm.	*sq. cm.*
J. L.	0.4	0.3
D. W.	1.4	0.3
D. M.	4.0*	1.0
B. M.	4.1	1.0
P. D.	4.0	1.2
R. D.	3.0	0.9
J. J.	4.4	0.3
M. M.	3.2	2.3
B. M.	1.8	0.4
F. C.	3.0*	3.6
R. N.	5.0*	2.4
J. M.	1.2	0.7
D. S.	3.0	0.9
D. K.	1.9	2.1
E. D.	1.0	1.0
J. D.	5.0	1.0
W. S.	0.7	0.3
S. W.	2.7	0.4
E. E.	0.3	0.3
W. C.	2.0	0.3
A. M.	4.4	0.7
D. M.	3.0	0.6
L. W.	3.4	0.4
V. F.	2.8	0.8
L. N.	1.0	0.7
K. N.	4.1	3.6
R. P.	6.0	0.3
A. W.	4.3*	0.5
A. T.	3.6	0.3
M. M.	5.0*	0.6
P. W.	6.0	0.4
J. G.	3.3	0.5
D. W.	1.0	0.6
C. M.	4.0	1.7
C. F.	3.0	0.5
P. G.	0.5	0.5
R. D.	1.4	1.0
D. K.	5.0*	3.8
E. B.	5.1	3.8
M. T.	7.0	2.1
S. M.	3.0	0.4
D. S.	1.7	0.6
M. M.	2.5	0.6

*Vesiculation.

Here again B.C.G. proved to be as accurate as O.T. Three subjects were found to be mildly positive to both. The remaining 45 were negative to both materials. Pseudoreactions were much more common with O.T. and took forty-eight hours or more to fade, whereas with B.C.G. these false-positive reactions were much less frequent and less severe and faded much more quickly.

In the final phase of the study 10 known positive reactors were tested with 1:100 dilution of O.T., after which they were retested with a 1:100 dilution of B.C.G. tuberculin. The difference in reactions was marked (Table 2). In 6 of the 10 O.T.-tested children vesicles, mild necrosis with markedly sore arms and temperatures ranging from 101 to 104°F. developed. The tests with B.C.G. were all definitely positive; none were borderline, but were without vesiculation and were unaccompanied by fever or other constitutional symptoms.

TABLE 2. *Comparative Intensity of Positive Tuberculin Reactions.*

SUBJECT	AREA OF REACTION* WITH O.T. 1:100	AREA OF REACTION* WITH B.C.G. 1:100
	sq. cm.	*sq. cm.*
J. J.	9.0†	6.2
M. M.	9.0†	9.0
V. L.	2.2	2.2
D. K.	9.0	4.0
P. D.	16.0†	4.0
D. W.	4.0	4.0
D. S.	9.0†	2.2
P. G.	4.0	4.0
R. D.	9.0†	4.0
L. N.	9.0†	4.0

*Length and width of induration.
†Vesiculation and temperature of 101 to 104°F.

DISCUSSION

B.C.G. tuberculin proved to be as accurate as O.T. since, despite the greater severity of the reactions with the latter, the tests all ran parallel in regard to positiveness or negativeness. In the dilution of 1:100 the reactions to B.C.G. tuberculin were so definitely positive that there was no question of interpretation and no need for further testing with still larger doses. It is possible that a smaller dose of B.C.G. tuberculin would be even more satisfactory as an initial and single testing strength material, thereby reducing still further the incidence of severe positive reactions and pseudoreactions. An optimum dose for routine intracutaneous testing, depending of course, on further observation and standardization, probably lies in a dilution between 1:1000 (0.1 mg.) and 1:200 (0.5 mg.). From our observations thus far, a dilution of 1:500 (0.2 mg.) appears to be the preferred dose.

The difference between the two tuberculins cannot properly be explained on the basis that B.C.G. tuberculin is derived from bovine and O.T. from human tubercle bacilli, because it has been demonstrated by numerous observers that bovine and human tuberculins share a common antigen.

Nor can one ascribe all the differences in the severity of the reactions to the dissimilarity in the mediums used in the preparation of the two tuberculins. It is true that Magnusson and Lithander[5] found that the glycerolated broth, which is the medium used for the preparation of O.T., will give larger and more frequent reactions than Sauton's (protein-free) synthetic medium, which is used for the preparation of B.C.G. tuberculin, but it is doubtful if this has any perceptible effect upon the real tuberculin reactions read in forty-eight to seventy-two hours.

It is very likely that the difference between the two tuberculins is qualitative as suggested by the work of Magnusson and Lithander.[5] They found that in B.C.G.-vaccinated children B.C.G. tuberculin will provoke reactions considerably earlier and more frequently than O.T. A better understanding of this qualitative difference may give more insight into the relation between allergy and immunity in tuberculosis.

Summary and Conclusions

From preliminary observations, it is fair to conclude that B.C.G. tuberculin is a reliable and safe testing material. With similar dosages, given intracutaneously, B.C.G. tuberculin produced much less severe positive reactions without undesirable local and constitutional manifestations and fewer pseudoreactions than were seen with the use of O.T.

Pending further standardization of the proper dosage, B.C.G. tuberculin should prove to be suitable as a single-strength tuberculin for routine testing. This, it is hoped, would obviate, except in rare cases, the necessity for the present method of repeated testing.

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OBSERVATIONS ON THE SYMPTOMATIC TREATMENT OF CHRONIC VASCULAR HEADACHE WITH CAFERGONE (ERGOTAMINE TARTRATE AND CAFFEINE)*

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THE migrainous patient is grateful for any medication that will afford him symptomatic relief. Until recently, about the only medication capable of offering him any appreciable degree of comfort was ergotamine tartrate. Within the past year, a new preparation, Cafergone,§ has become available. This product contains a combination of ergotamine tartrate and caffeine.

Ergotamine is a natural alkaloid derived from ergot, a fungus found growing upon rye and other grains. Its pharmacologic actions[1] in man can be briefly outlined as follows: increase in contractions of the uterus by direct stimulation of the uterine musculature; constriction of smaller blood vessels, which is probably due to a direct peripheral action on the vascular muscle and consequent increase in the blood pressure; bradycardia, which may be a reflex response to vasoconstriction or a result of the ability of ergotamine to inactivate cholinesterase; a variable and minor effect on the central nervous system; a damaging effect on capillary endothelium with resultant vascular stasis, thrombosis and tissue gangrene — the mechanism of this action is not completely understood but may be secondary to extreme vasoconstriction and slowing of the blood stream with subsequent endothelial injury (Yater and Cahill[2] found that gangrene was due to occlusion of the medium-sized and small arteries and arterioles by severe constriction and thrombus formation, intimal proliferation also possibly playing a role); and an adrenergic blocking effect[3] on the sympathetic nervous system through paralysis of the excitatory responses (and possibly the inhibitory responses also) to epinephrine and adrenergic nerve impulses. Ergotamine does not prevent the liberation of the chemical mediators (adrenin or sympathin) but prevents the effector cells from responding to this substance.[1] Its action in providing symptomatic relief in migraine is so specific that this therapeutic response is often used as a diagnostic sign of migraine. It exerts no sedative or analgesic action so that it is only rarely that other types of headaches will be relieved by this drug. The most probable explanation of its therapeutic effect is based upon the concept of migraine as expressed by Wolff,[4] in that the pain associated with migraine is due to dilatation and distention of relaxed cranial arteries, primarily branches of the external carotid artery. The therapeutic effect of ergotamine tartrate depends upon its specificity of action in its ability to constrict these relaxed and distended vessels.

Caffeine (1:3:7 trimethyl xanthine) is a derivative of coffee seeds and tea leaves. Its pharmacologic actions[1] can be briefly outlined as follows: stimulation of the central nervous system, especially the cortex (psychic and sensory functions and motor activity) and the medulla (respiratory, vasomotor and vagal centers); stimulation of the myocardium

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directly resulting in tachycardia, increased cardiac output and a slight rise in blood pressure or a reflex bradycardia by inhibition of the medullary vagal nuclei; dilatation of peripheral blood vessels by a direct effect on the vascular musculature or constriction of these vessels by central stimulation of the medullary vasomotor centers[1, 5]; relaxation of coronary blood vessels; relaxation of smooth-muscle spasm, especially that of the biliary tract and bronchi; stimulation of skeletal muscles; slight increase in the basal metabolic rate; and a diuretic effect. The action is not completely understood, but the drug is believed to accomplish this by decreasing tubular reabsorption of fluid. Caffeine has been reported to be occasionally effective in headaches and migraine. This may be related to changes that the drug produces in the cerebral circulation.[1] Wolff[4] reports that a mixture of caffeine and sodium benzoate administered intravenously acts as a vasodilator, whereas when given orally with a slower rate of absorption it may act as a vasoconstrictor. Thus, it may afford relief in migraine through its vasoconstricting action, for Wolff[4] has found that other agents, which decrease the amplitude of pulsations of the cranial arteries, may lessen and abolish the headache of migraine when they reduce the amplitude to a degree comparable with the reduction produced by ergotamine tartrate. Goltman,[6] by directly observing the bulging edematous brain during a migraine attack in a patient with an operative skull defect, and Redisch and Pelzer,[7] who examined the capillaries in the skin at the cuticle base and in the mucosa of the lower lips in patients during migraine attacks induced by forced water intake, present evidence that migraine may be associated with changes in water metabolism and retention of fluids. The diuretic action of caffeine could therefore furnish one explanation for its therapeutic effect in cases of migraine. Dreisbach and Pfeiffer[8] have demonstrated a "caffeine withdrawal headache," which may result from distention of the cranial arteries. The basic mechanism of this painful vasodilatation is obscure but may in some way be related to the sudden withdrawal of a central vasoconstricting agent, or accompanied by a relative increase in the effective blood volume.

Patients suffering from migraine have found that black coffee will enhance the effect of ergotamine tartrate or afford a certain degree of relief by itself. This, together with the known pharmacologic vasoconstricting and diuretic action of caffeine, resulted in the combination of ergotamine tartrate and caffeine for use in the symptomatic treatment of migraine. Friedman and Brenner,[9] in studying 94 patients with migraine treated with various agents, report that combinations of ergotamine tartrate with caffeine proved to be more effective in relieving the migraine attack than ergotamine tartrate alone. Horton, Ryan and Reynolds,[10] reporting 55 cases of headache, state that 56 per cent of patients obtained excellent results and 24 per cent obtained some relief with E. C. 110 (Cafergone) and that practically all the patients studied believed that E.C. 110 was more effective than ergotamine alone.

The following report deals with our results obtained with the use of this preparation.

Clinical Material

Fifty patients with chronic vascular headache were given a therapeutic trial with Cafergone. This was administered in oral tablets (E. C. 110) and in the form of a rectal suppository (E. C. 112). The oral preparation contained 100 mg. of caffeine and 1 mg. of ergotamine tartrate. The dosage was three tablets immediately during the aura or at the first warning of an impending headache and then one every half hour as needed for three subsequent doses, the total dosage not exceeding six tablets. In this group of patients there was a young boy, eleven years of age, to whom the drug was effectively administered in half this dosage. For patients who had extreme nausea and vomiting as a side effect of ergotamine or as part of the migrainous attack and who could not retain an oral preparation, the medication was supplied in the form of a rectal suppository. Each suppository contained 100 mg. of caffeine and 2 mg. of ergotamine tartrate. One suppository was used immediately upon the first warning of the onset of the headache, and then one every half hour as needed for two subsequent doses, the total dosage not exceeding three suppositories. A course of therapy was not repeated more often than once every ten days. Each of the patients was given at least two trials of therapy before definite evaluation was established.

Results were evaluated and tabulated as follows: none — no relief obtained; doubtful — doubtful relief after a complete course of medication; mild — mild relief after a course of medication; moderate — moderate relief after a partial course of medication or definite relief after a complete course of medication; and marked — marked and definite symptomatic relief after two or three tablets or one suppository, each time the medication was employed.

Table 1 summarizes the findings.

Table 1. *Results of Treatment of 50 Patients with Chronic Vascular Headache.*

Type of Headache	No. of Patients	Relief Obtained with Cafergone	No Relief Obtained with Cafergone
		No. of Patients	No. of Patients
Histaminic	2	2	0
Allergic	4	3	1
Migraine	44	37	7
Totals	50	42	8

Histaminic Cephalgia

Cafergone was administered to 2 patients with typical histaminic cephalgia as described by Horton.[11] The symptomatology of this syndrome was characterized by unilateral headaches, of short duration, with sudden onset and cessation, often occurring at night, and associated with rhinorrhea, lacrimation, flushing and sweating of the forehead on the same side. One patient achieved an effective response varying between mild and marked, and in the second case marked relief of symptoms was noted.

Allergic Headache

Cafergone was given to 4 patients with typical allergic headache as described by Eyermann.[12] The criterion for diagnosis of this condition was a nonmigrainous type of vascular headache, with diffuse head pain, brought about as a result of the ingestion of a food or drug in a sensitive patient often suffering with an associated allergic disorder. In this group, 1 patient obtained no relief with this preparation, whereas the other 3 noted moderate relief with both the oral and suppository forms. One patient in this group also had Ménière's syndrome of allergic etiology associated with the cephalalgia. It is interesting to note that Cafergone resulted in complete relief of the headache but did not affect the symptomatology of the Ménière syndrome.

Migraine

In this series of patients there were 44 cases of migraine. Thirty-six patients had the typical vasodilating type of migraine with the characteristic paroxysmal, periodic, recurrent, unilateral headaches, throbbing in nature, preceded by an aura and scotomas and associated with nausea, vomiting and photophobia. In 8 cases one or more or these features of the classic pattern were lacking, so that the established diagnosis was atypical migraine. Thirty-four patients were females, and 20 males were included in this series. Their ages ranged from eleven to fifty-nine years. The condition had been present from two and a half years to fifty years. The etiology of the migraine in these patients varied, with 25 cases due to allergy in this group. This in no way reflects the true incidence of allergy as the cause of the migraine, for allergy usually produces this syndrome in a much smaller percentage of cases. It should be pointed out that the reason that the migraine could be attributed to allergy in such a large percentage of our patients was that they were attending an allergy clinic, by reason of referral from another department that had suspected an allergic etiology or because they were allergic persons receiving treatment in this clinic for associated allergic diseases.

The therapeutic results achieved with Cafergone in this series of patients are summarized in Table 2, 3, 4 and 5.

In the total series of 44 patients with migraine, 37 noted relief of symptoms with the use of Cafergone, and 7 reported no relief. In the cases in which no relief was obtained, 3 patients had symptoms of classic migraine, and 4 had atypical migraine. Of the 8 patients in the entire group suffering with atypical migraine, 4 noted relief of symptoms, and 4 experienced no relief after a course of Cafergone.

It is noteworthy that one patient in whom Cafergone was effective reported that the only thing that had given her relief prior to this was black coffee. Another stated that antihistaminics were

TABLE 2. *Degree of Relief Obtained with Cafergone in 44 Patients with Migraine.*

RELIEF	NO. OF PATIENTS
None	7
Doubtful	2
Mild	5
Moderate	17
Marked	13

TABLE 3. *Cafergone Compared with Ergotamine Taken Orally in 32 Patients.*

ERGOTAMINE TARTRATE SUPERIOR	CAFERGONE SUPERIOR	NO DIFFERENCE NOTED	NO RELIEF OBTAINED WITH EITHER DRUG
NO. OF CASES	NO. OF CASES	NO. OF CASES	NO. OF CASES
2	22	4	4

TABLE 4. *Comparison of the Efficacy of Cafergone Administered Orally (E. C. 110) and by Rectal Suppository (E.C. 112) in 25 Patients.*

ORAL TABLETS (E. C. 110) SUPERIOR	RECTAL SUPPOSITORIES (E. C. 112) SUPERIOR	NO DIFFERENCE NOTED
NO. OF CASES	NO. OF CASES	NO. OF CASES
11	8	6

TABLE 5. *Analysis of 33 Patients with Migraine Previously Treated with Ergotamine Tartrate.*

PREVIOUS RELIEF WITH ERGOTAMINE TARTRATE	PATIENTS WHO OBTAINED RELIEF WITH CAFERGONE AFTER NO RELIEF WITH ERGOTAMINE	PATIENTS WHO DID NOT OBTAIN RELIEF WITH CAFERGONE AFTER NO RELIEF WITH ERGOTAMINE
NO. OF CASES	NO. OF CASES	NO. OF CASES
22	8	3

more effective than either ergotamine or Cafergone. It is also interesting to point out that in 1 case in which a marked therapeutic effect was achieved with Cafergone, the patient reported an accompanying diuresis each time this preparation was employed.

Eight patients exhibited side reactions with the oral medication. Five who manifested gastrointestinal reactions noted absence of these side effects when switched to the rectal-suppository form, and only 3 of these patients also had side reactions to the suppository as well. Among the side effects listed were nausea, vomiting, irritability, feverishness, paresthesias and weakness. These side reactions, especially nausea and vomiting, were effectively controlled with 0.4 mg. (1/150 gr.) of atropine sulfate, administered by hypodermic injection or with tincture of belladonna (10 to 15 drops) when symptoms were less severe.

Discussion

From the data presented above, it appears that preparations containing ergotamine tartrate combined with caffeine are effective in the symptomatic treatment of migraine. The addition of caffeine to the ergotamine tartrate in all probability exerts a synergistic action through either its vasoconstrictor or its diuretic effect. It appears that some patients who find no relief with ergotamine tartrate taken orally may achieve some degree of symptomatic relief with Cafergone. Many patients who find the oral preparation of ergotamine effective in the treatment of their migraine now find that Cafergone affords them a still greater degree of relief of symptoms. Some patients who obtain symptomatic relief only with ergotamine tartrate administered subcutaneously now find that Cafergone will achieve a similar therapeutic response, and it is therefore preferred by many of these patients because of the elimination of the necessity of a hypodermic injection. However, there are still many patients suffering with migraine who find that ergotamine tartrate by hypodermic injection is the only medication that will afford any appreciable degree of symptomatic relief. Like ergotamine, Cafergone is most effective when given during the period of aura or at the first warning of an impending headache rather than after the symptoms of migraine are well established. Its chief value lies in aborting the syndrome in its early stages. It is of no value in vasoconstrictive ("white") migraine, in which the indicated therapeutic agent to be employed is a vasodilating drug. Its side actions are essentially similar to those of ergotamine. Nausea and vomiting are effectively controlled with atropine sulfate, administered subcutaneously, and the muscle pains and weakness of the extremities are relieved by the intravenous administration of 10 cc. of 10 per cent calcium gluconate. Often, when the patient can tolerate nothing by mouth because of extreme nausea and vomiting, simply switching to the rectal suppository form of this preparation will result in symptomatic relief.

The contraindications to the use of Cafergone are essentially similar to those of ergotamine. Prolonged usage and overdosage can lead to the symptoms of ergot poisoning, and for that reason a total of 6 tablets or 3 suppositories should not be administered more often than every ten days. Because of its action in producing vasoconstriction and affecting damage to blood vessels the drug is contraindicated in coronary-artery and peripheral vascular diseases. Owing to its hypertensive effect, it should not be used when an associated hypertension exists. It is also contraindicated in pregnancy because of its direct stimulating action on uterine musculature. There is some evidence that increased sensitivity to ergot alkaloids may accompany febrile and septic states, hyperthyroidism and disease of the liver or kidneys, and its use is therefore precluded in these conditions. The dosage of caffeine included in this preparation is below the toxic level of 10 gm., and untoward reactions are usually not produced with doses under 1 gm. The side effects of caffeine, which are usually referable to the central nervous and circulatory systems, consist of insomnia, restlessness, excitement, tachycardia, extrasystoles and diuresis. These are usually well controlled by short-acting drugs of the barbiturate series.

Summary

A series of 50 patients with chronic vascular headache were given a therapeutic trial with Cafergone, a new preparation containing a combination of ergotamine tartrate and caffeine.

The data presented suggest that the synergistic action of caffeine when added to ergotamine tartrate is more effective in some patients with migraine than ergotamine alone, when given orally, and is occasionally as effective as ergotamine tartrate when administered hypodermically.

The indications and contraindications for its use and the side actions produced are essentially those of ergotamine tartrate.

The pharmacology of ergotamine and caffeine, their therapeutic actions in the symptomatic treatment of migraine and the treatment of side effects produced are discussed.

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MYCETOMA*

Report of a Case of Actinomycotic Variety

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MYCETOMA is a chronic granulomatous infection usually involving the feet, rarely affecting the hands[1] and still more uncommonly the leg, knee, neck and trunk.[2] It is caused by a number of fungi, although the clinical and pathological picture is much the same regardless of etiologic agent. The disease most commonly occurs in males of the working age group with an agricultural background.[3] There is no definite racial susceptibility, although certain racial groups, because of their occupational capabilities, are more frequently afflicted.

Mycetoma, or Madura foot, if one uses the geographicoanatomic nomenclature, is most prevalent in the warmer climes. The original reports were from India, but since then numerous cases have been reported from Africa, Europe and South and Central America and certain portions of North America. The majority of the cases in the United States involved people indigenous to the Southern and Western areas. No reports of the occurrence of the condition in Australia have been found.

NOMENCLATURE

According to Castellani and Chalmers,[4] natives of Ballary knew Madura foot as "ghootloo mahdee" or "eggs of insects" because of the resemblance of the tubercular irregularities on the surface of the foot to ovum.

The vernacular terms "keereenagoah" and "kirinigras" are used in the Punjab and Rajputana respectively to describe mycetoma. Both words mean "dwelling house of worms" and came into use because the sinus tracts were considered to resemble cavities often occupied by larvae of flies.

Other local Indian terms are "slipada" (Bengalese) and "hatty-ka-poung" (Deccan) applicable to both elephantiasis and mycetoma and meaning "elephant leg."[5]

Some descriptive terms used to delineate the condition are endemic degeneration of the bones of the foot, elephant foot, eggfoot, ulcus grave, podelcoma and morbus pedis entophyticus.[5] The eponym Ballingall's disease, synonymous with mycetoma, persists in the literature.

HISTORY

Madura foot was first noted by Indian physicians and is elucidated in early Sanskrit medical works. By many Kämpfer,[6] a Pondichery missionary, is credited with being the first to describe the condition. In 1712 he used the term "perical," which means "leg of an elephant" and is applicable to any enlargement of the foot, but his description of the condition is classic for mycetoma. There is, however, some doubt about other very early cases because of laxness of terminology.

Madura foot was frequently misdiagnosed as tuberculosis by early authors. Godfrey,[7] in 1844, described a probable case of mycetoma as "morbus tuberculosis pedis," believing it to be tuberculosis of the foot with incidental black deposits.

In 1842 Gill in the dispensary of Madura, a city in the southern part of the Madras province of India, called attention to a peculiar affection of the foot. It remained for Colebrook,[6] Gill's successor, to introduce the term "Madura foot" into the literature in 1846.

In 1860 Van Dyke Carter[8] established the fungous nature of the disease and proposed the name mycetoma (μυκης, fungus, and ωμα, tumor). He also proposed the earliest classification of the disease based on the color of the grains.

Reports have been numerous since that time, especially in the literature of nations founding empires, describing cases found in tropical and subtropical colonies. In 1894 Vincent,[9] in Algiers, isolated an actinomycete from ochroid grains. In 1898 Wright,[10] of Boston, isolated a hyphomycete from the black-grained variety. In 1906 Brumpt[9, 11] reviewed the literature and provided an important mycologic study on the subject.

About that time much work was done in the analysis and classification of the causative organ-

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isms. In 1913 Pinoy[12] proposed that cases of Madura foot caused by an Actinomyces be called actinomycoses and those caused by a true mold be designated mycetomas. This suggestion was modified by Chalmers,[7] who, in 1916, used the term mycetoma as synonymous with Madura foot and distinguished actinomycotic and maduromycotic varieties of mycetoma. This is the nomenclature accepted today.

Mycetoma has been recognized in the United States since 1876, when Kemper and Jameson[13] reported a case in a resident of Indiana, though some question of the accuracy of the diagnosis has been raised. Hyde and Senn,[14] in 1896, reported a case in an Iowa dental student.

Since that time a number of cases have been recorded in the literature as having originated in the continental United States (Table 1). Over half these have been reported from Texas, California and Arizona.

TABLE 1. *Cases of Mycetoma Originating in the United States.*

Case No.	Author	Location
1	Kemper and Jameson[13]	Indiana
2	Hyde et al.[14]	Iowa
3	Pope and Lamb[15]	Texas
4	Wright[16]	Massachusetts
5	Arwine and Lamb[16]	Texas
6	Allison[17]	Texas
7 and 8	Sutton[18]	Texas (2 cases)
9	Winslow[19]	Maryland
10–12	Boyd and Crutchfield[6]	Texas (3 cases)
13	Boyd and Crutchfield[6]	Arizona
14–16	Pagenstecher[20]	Texas (3 cases)
17–19	Lovejoy and Hammack[21]	California (3 cases)
20	Lovejoy and Hammack[21]	Arizona
21	Gammel et al.[22]	Ohio
22	Harrold[23]	Georgia
23	Halloran[24]	California
24	Thompson and Ideda[25]	Minnesota
25	Puestow[2]	Wisconsin
26	Gay and Bigelow[26]	Massachusetts
27	Jones and Alden[27]	Georgia
28–30	Brindley and Howell[28]	Texas (3 cases)
31	Gellman and Gammel[29]	Maryland
32	Shaw and MacGregor[30]	Kansas
33	Hanan and Zurett[31]	New York
34	Dixon[32]	Virginia
35	Beck[33]	Indiana
36	Fienberg[34]	Georgia
37	Symmers and Sporer[1]	New York
38, 39	Gottlieb[35]	California (2 cases)
40	Venable and Gaston[36]	Georgia
41–43	Burns et al.[37]	Louisiana (3 cases)
44	Wood[38]	California
45	Clough[39]	California
46	Leven (Cited by Clough[40])	Texas
47, 48	Fite (Cited by Clough[40])	Oklahoma (2 cases)
49	Twining et al.[41]	Pennsylvania

Pathology

Most commonly the lesion involves the foot. Much less often the hands or other portions of the body are affected. Characteristically, the disease remains localized to the extremity, although local tissue destruction may be far advanced.

The afflicted member is markedly swollen, the amount of swelling corresponding to the progress of the infection. Necrosis of the overlying skin is associated with the development of sinuses into the deeper tissues.

On section of the involved member a profusion of scarring, discoloration and necrosis is noted. Sinus tracts extend to involve any or all of the deeper tissues. Abscesses connecting with the sinus tracts may extend along the tendons. In advanced cases involvement of osseous tissue is usually present.

Microscopically the fungous grains are seen to be surrounded by polymorphonuclear leukocytes, many of which are undergoing degeneration. Lymphocytes, plasma cells and macrophages are present as one proceeds peripherally. Varying amounts of fibrous tissue are present. An accumulation of large numbers of lipoid-bearing macrophages is described in some specimens. Eosinophils and pigment-bearing macrophages are also observed.

Mycology

In earlier considerations of Madura foot the disease was usually classified on the basis of the color of the grain found in a given specimen. Thus, a pale or ochroid variety, a melanoid variety and an uncommon, red variety were distinguished. On microscopical examination the granules were seen to be composed of mycelia, pigment granules and leukocytes.

However, it has been shown that each color may be produced by a number of different fungi and that a given species may produce grains of different color.[9]

On microscopical examination of the grains, after softening in potassium hydroxide, individual hyphae may be studied.

In the maduromycoses the grain is seen to be composed of a central mass of segmented branched hyphae with well defined walls and chlamydospores of various sizes. About the periphery the hyphae assume a radiating appearance and terminate in chlamydospores.

Grains from the actinomycotic variety are seen to be composed of a mass of more delicate, thin-walled, nonsegmented hyphal filaments. Chlamydospores are absent. The ends of the hyphae are surrounded by a gelatinous sheath, which gives a club-shaped appearance to the ends of the filaments.

Cultural characteristics vary with the causative agent. Sabouraud's agar produces the most satisfactory growth. Animal inoculations have been tried by numerous authors.[9, 12, 42, 43] On the whole, these have been unsatisfactory, although local, nonprogressive lesions have been produced.

Gammel,[9] in his study on the etiology of the mycetomes in the United States listed thirteen species of the genus Actinomyces as well as nineteen species belonging to two classes (*Fungi imperfecti* and Ascomycetes) and eight genera. His list has been modified and brought up to date by Conant.[44]

Diagnosis

The diagnosis of mycetoma is not a difficult accomplishment if the condition is kept in mind. A fairly typical set of symptoms and physical findings is present in most cases.

The patient is usually a male of the working age group with an agricultural background and an antipathy toward wearing shoes. There is usually a history of trauma, perhaps slight and far removed in time. A local lesion, either nodular, vesicular, pustular or ulcerative, appears. This is slow to heal, but since it causes little pain, the patient does not seek medical advice. The lesion drains serosanguinous or purulent fluid for a time and then heals, at least externally, only to return again at a later date. The involved extremity continues to swell. The condition is for a long time annoying rather than disabling, but it is always progressive.

After several months, perhaps several years, the patient presents himself to a physician.

The patient is by this time in fair general condition, perhaps evidencing some weight loss. Temperature and pulse are within normal limits. There is swelling that involves a large part or all of his foot. The surface of the swelling is marked with nodular, sinus-tract openings and ulcerations. Scar tissue is present, and there may be pigmentary changes. A probe can be inserted through the sinus tracts into the deeper tissues.

The blood count is usually normal, though a mild secondary anemia may be present. If granules are present in the drainage from the sinuses, direct examination under the microscope, as well as culture on appropriate mediums, is very helpful in establishing the fungal origin of the disease. If granules are not so readily available, a biopsy specimen may be taken for histologic examination and for culture.

X-ray study is helpful in establishing the presence of bone involvement. When such involvement is present the picture is that of marked osseous degeneration of both infectious and osteoporotic nature.

Differential Diagnosis

Tuberculosis can produce local lesions quite similar to those seen in mycetoma. However, systemic symptoms are usually more marked with tuberculosis. In tuberculosis a pulmonary lesion may be present. Tuberculin skin test and culture and guinea-pig inoculation of suppurative material would be helpful in the differentiation from tuberculosis.

Syphilis should be differentiated. Here the history, serologic changes and response to treatment help elucidate the true nature of the condition.

Diabetes can produce a strikingly similar picture, and again the laboratory will aid in diagnosis with tests for hyperglucosuria and hyperglycemia.

The possibility of other fungous diseases such as coccidioidomycosis, blastomycosis and sporotrichosis should be entertained in occasional cases. These should be distinguished by serologic methods, skin tests and identification of the fungus if the clinical picture is not sufficiently clear cut.

The differentiation of Madura foot from yaws and elephantiasis might cause some confusion. Yaws, however, is characterized by a greater systemic response, the occurrence of secondary lesions and the presence of rather definite racial predisposition. Elephantiasis is a lymphangitis involving usually an entire extremity rather than a peripheral portion of one as in mycetoma. Mycologic studies would rule out both these possibilities.

Malignant neoplasm could present a similar local picture. This can be readily separated by mycologic study and biopsy.

Treatment

To date no satisfactory therapeutic agent, except surgery, has been devised for the treatment of mycetoma, although numerous ones for both local and systemic use have been tried.

Local application of iodides was advised by Woolrabe.[45] Audrain[46] suggested mercurochrome. Numerous other local germicides have been tried without favorable results. Chemical or thermal cauterization likewise has been unsuccessful. Tyrothrycin and gramicidin were used in the case reported below.

A long list of medications for internal use has been advocated. Woolrabe[45] recommended oral administration of iodides. Palmer[47] advised bismuth, sodium tartrate and copper citrate, reporting good results with this combination. Thymol[22] and oil of cinnamon[9] have been suggested, but little success has followed their use. Arsphenamine[22] has not been effective. Sodium proprionate has been shown to be effective in vitro in large concentrations, but its clinical use[48] has not been successful. The sulfonamides have been credited with cures of the actinomycotic variety.[32, 49] More recently, penicillin has been advocated[41] and streptomycin was used in the case presented here. It is felt by many that the chief effect of these last three agents is on the secondary invaders.

X-ray therapy has been tried[22] but does little more than slow the progress of the disease.

Amputation or surgical excision is the treatment of choice at this time although a trial of less radical therapy is always indicated.

Prognosis, so far as life is concerned, is good without treatment. Patients have lived for more than fifteen years with the disease without treatment. Prognosis for the cure of the lesion without treatment is extremely poor. An insidious, progressive course with remissions and exacerbations is the rule.

Case Report

W. M., a 51-year-old Negro veteran, was admitted to the Lake City Veterans Administration Hospital on May 20, 1947, complaining of swelling of the left foot, ulceration and slight pain. About August, 1946, he had first noticed what he called "athlete's foot of both feet," more severe on the left side. By December the symptoms had become very severe, and the patient was plagued by almost continual itching. He believed that he had probably scratched it in his sleep. His physician advised topical medications to the foot. By March, the patient was unable to work. He went to bed and remained there, continuing to apply local medications to the foot. The skin broke down, and numerous, small sinus tracts appeared, exuding a foul-smelling purulent material. The skin of most of the dorsum of the foot sloughed away, and the tendons became visible beneath the necrotic ulcer base. The patient stated that when he lay in bed he could find relief from nagging pain in his foot only by placing a pillow beneath his knee. This was responsible for a 25° flexion deformity of the knee existing at admission.

The patient had always worked as a janitor except for 12 months in the Army as cook's helper. There was no history of agricultural employment. He had never left the state of Florida. There was no history of venereal disease. No history of injury to the foot could be elicited. The patient had lost 15 pounds in weight. There was no history of night sweats. There was a history of shortness of breath on exertion. The only peripheral edema had been in his left foot present since December, 1946.

Physical examination disclosed a well developed man, mildly undernourished, lying in bed with his left knee extended to 155° with a pillow beneath it. The peripheral vessels were firm, but both dorsalis pedis pulses were obtainable, as were the posterior tibials. The radial pulse was of good quality. The reflexes were normal except the ankle jerk on the left, which was somewhat diminished, probably because of local edema. Examination of the right foot revealed some hypertrophy of the nails, but no evidence of onychomycosis. The left foot (Fig. 1) presented a rather bulbous and formless shape from the malleoli to the ends of the phalanges. The left great toe was black, and the pulp of the toe diminished in quantity. The left foot presented a large sloughing area, which started over the fourth metatarsal bone on the anterior surface extending to the ankle joint and thence around the apex of the arch on to the plantar surface of the foot beneath the great toe terminating in the region of the third metatarsal head. The skin of the anterior surface was pockmarked with crypts and sinuses. Some eroded areas were evident in which a probe could be inserted to osseous tissue.

The blood pressure was 140/80.

Urinalysis was negative. Examination of the blood showed a red-cell count of 4,200,000 and a white-cell count of 12,000, with 80 per cent neutrophils and 20 per cent lymphocytes. The nonprotein nitrogen was 25 mg. per 100 cc. The fasting blood sugar was 70 mg. per 100 cc. A 5-hour glucose tolerance test revealed a normal curve. The blood calcium was 9 mg. per 100 cc. A Congo-red test showed no evidence of amyloid disease. The total protein was 5.6 gm. per 100 cc. The serologic test for syphilis was negative. The icteric index was 4 units.

The spinal fluid was normal.

X-ray examination demonstrated sclerotic changes in the femoral arteries above the knees. Examination of both legs showed a moderate degree of osteoporosis involving practically the entire left tibia, with some involvement of the bones of the right foot. Irregular bone absorption was noted in the cortex at the medial aspect at the left tibia. Films of the left foot showed a marked degree of osteolysis of the first metatarsal bone and the phalanges of the great toe. Osteolytic changes were present to a lesser degree in the other toes.

On admission to the hospital a course of penicillin, 50,000 units every 3 hours, was begun. This treatment was continued for a period of 2 months supplemented by administration of sulfadiazine, 1 gm. every 4 hours, and Lugol's solution, 15 drops three times a day. The patient was also given a course of Fuadin. He was given a therapeutic trial of streptomycin, 0.5 gm. every 12 hours for 5 weeks. This was discontinued because of mild deafness and tinnitus, and after 7 days a second course was instituted. In 6 weeks symptoms of toxicity reappeared, and the drug was stopped. Neither symptomatic nor clinical relief of the condition was evident at the time of cessation of treatment.

The patient required codeine and aspirin for relief of the pain in the foot. He was given a high-protein, high-vitamin diet, supplemented by intravenous injection of proteins, and was also given a transfusion of 500 cc. of whole blood on two occasions.

Local treatment consisted of immersion in potassium permanganate soaks for a period of 3 weeks. This was followed by tyrothrycin and gramicidin by continuous drip. These local applications had no apparent effect on the course of the disease.

Cultures were taken from the sinuses and from the necrotic areas on the dorsum and plantar surface of the foot. These cultures repeatedly grew *Aspergillus niger*. A biopsy was done. This tissue was examined microscopically and cultured. Culture of the biopsy material again grew *A. niger*. A biopsy specimen was inoculated into a guinea pig, and the animal was killed at the end of 4 months. No disease was noted on post-mortem examination of the animal. The microscopical diagnosis of the biopsy specimen was Madura foot, probably of the actinomycotic variety. At no time was Actinomyces cultured although repeated attempts were made.

Figure 1. *View of the Foot Prior to Amputation.*

The patient and two controls were tested with a vaccine prepared from *A. niger* cultured from the patient's foot. Controls were negative in 12 and 48 hours. A macule 2 cm. in diameter at 12 hours developed and widened to 4 cm. in 24 hours. A papule formed in the center and went on to pustule formation 1.5 cm. in diameter. The reaction continued to necrosis and healing. A skin test with purified protein derivative No. 1 was read as 1-cm. wheal and 2-cm. erythema. Coccidioidin, histoplasmin and blastomycin skin tests were negative, as were agglutinations for typhoid and brucellosis.

On August 27, after no clinical improvement, a decision was made to amputate the left foot, giving the patient a below-the-knee stump. The amputation was satisfactory for a period of about 3 weeks. The patient had a flexion contracture of the left knee at 155°, which was corrected by Kirschner-wire traction to 170°. At the end of 3 weeks an intractable breakdown of the skin at the end of the stump occurred. The erosion continued into the remainder of the gastrocnemius and soleus muscles. A culture showed *A. niger* and *Staphylococcus aureus*, coagulase negative. Decision was made to reamputate in the region of the thigh. This was accomplished on October 30. The patient's recovery from that date was uneventful. The stump was normal, and a prosthesis was ordered and provided.

Since the time of the second amputation the patient has continued to gain weight and to improve generally in clinical appearance.

At the first operation the left foot and leg were amputated at the junction of the upper and middle thirds. The foot had a bulbous form. The great toe was black and soft. On the anterior aspect of the foot there was a large ulcerated area, which started over the fourth metatarsal bone and extended

anteriorly upward to the level of the ankle and around the arch to the plantar surface of the foot beneath the great toe, extending as far laterally as the region of the third metatarsal. The skin and ulcer base of the dorsum were marked with sinus openings. The edge of the ulcer was firm, white and undermined. On cut section the process of tissue destruction was seen to have extended to involve the bones of

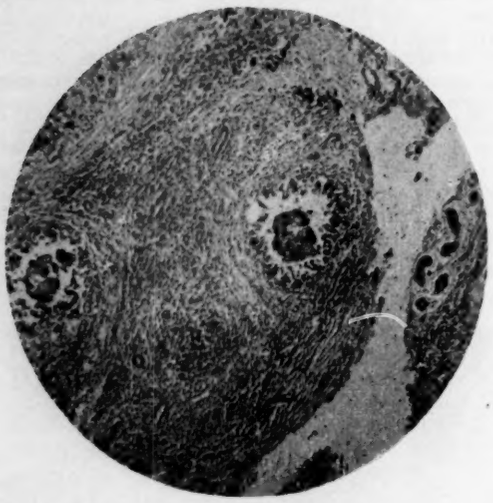

FIGURE 2. *Photomicrograph of the Actinomycotic Abscess (x100).*

the foot. The bones distal to and including the metatarsals were softened and eroded. The sinus tracts were seen to be processes of abscess pockets filled with a yellow-green purulent exudate. There was a tendency for the abscesses to extend along the tendon sheath. The muscles in the region of tissue destruction were scarcely recognizable and even

FIGURE 3. *Photomicrograph of the Actinomycotic Abscess (x440).*

above this point were pale and flabby. The arteries were patent.

The microscopical sections were prepared from the region of the ulcer edge as well as from the site of deeper tissue destruction. Sections of the former showed Negroid skin terminating abruptly at the edge of an ulcer. There a fibrinopurulent exudate covered a granulation-tissue base.

Sections through the deeper tissues showed edematous, degenerating, striated muscle and much granulation tissue. Numerous small abscesses were present (Fig. 2). These contained a polymorphonuclear exudate. Some of these abscesses were seen to contain granules made up of a thin, delicate mycelium (Fig. 3).

Dr. Norman Conant, of Duke University School of Medicine, was kind enough to review the slides. It was his opinion that they contained actinomycotic granules.

At the second operation the upper third of the left leg and the lower quarter of the left thigh were amputated. An ulcer, 4.0 by 1.0 cm., was situated posterior to the line of the old surgical incision. There was another ulcer, which measured 5.2 by 2.3 cm., over the tibia anteriorly. The ulcer edges were composed of hyaline material and were well demarcated, averaging about 2 mm. in thickness. The base of the ulcer was composed of a thin layer of green, purulent material overlying fresh granulation tissue. The ulcer over the tibia was separated from it by a thin layer of periosteum. The muscles were of a tan color and flabby consistence. The arteries were patent. The knee joint when opened presented no abnormality. The distal ends of the remainder of the tibia and fibula were softened and eroded. They were in contact with the purulent exudate from the ulcer near the old incision.

The microscopical sections showed degenerative changes identical with those described for the previous specimen except that no granules were noted.

Discussion

The case of mycetoma reported above followed a rather usual clinical pattern, the response to therapy being similar to that reported in previous cases. Iodides, Fuadin, sulfadiazine, penicillin and streptomycin were tried, with no apparent benefit. Local applications, including potassium permanganate, tyrothricin and gramicidin, did not appreciably alter the course of the infection. Finally, after an adequate surgical operation, the patient made an uneventful recovery.

Of interest is the patient's sensitivity to an extract of *A. niger*. The organism was repeatedly grown on culture from the infected area but was never seen in tissue sections. It is believed that this organism may have been growing in the superficial layers, perhaps as a secondary invader, and that the patient thus became sensitized to the fungus. Unfortunately, we were unable to culture an Actinomycete to check the patient's sensitivity to that organism.

Summary

A case of mycetoma, probably of the actinomycotic variety, is presented.

Of interest is the fact that sensitivity to an extract of *Aspergillus niger* was demonstrated.

Various therapeutic agents, including iodides, Fuadin, sulfadiazine, penicillin and streptomycin, were used, without benefit to the patient. Local applications of potassium permanganate, tyrothricin and gramicidin likewise were of no appreciable aid.

An uneventful recovery followed adequate surgical amputation.

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CLINICAL NOTE

HERPES GESTATIONIS*

Fetal-Anomaly Syndrome Treated Successfully with Sulfapyridine

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THE following case is presented to demonstrate the dramatic response of herpes gestationis to small doses of sulfapyridine.

E.D., a 41-year-old woman, developed herpes gestationis at 4½ months of her second pregnancy. Her first child had died a few days after birth of what was thought to be congenital heart disease. Local applications and antihistamines were of no value. She was given sulfapyridine, 1 gm. every 4 hours, and within 4 hours experienced extreme itching, nausea and vertigo. The medication was discontinued, but reinstituted 24 hours later in a dosage of 0.5 gm. three times a day. At the end of 3 weeks the skin was entirely clear. Twice the sulfapyridine was stopped and the dermatitis reappeared (Fig. 1). On reinstitution of 0.5 gm. three times a day the eruption again completely cleared, and the patient was delivered of a normal 8-pound boy.

Lewis[1] reported a similar response to small amounts of sulfathiazole. Intensification of the dermatitis was noted by Mueller and Lapp,[2] who employed full medical dosage of sulfapyridine. It is suggested that with lower dosage this disease can be controlled with fewer untoward reactions.

In a statistical review of 20 cases of herpes gestationis appearing in 13 women, the average time of onset was five and three-tenths months of pregnancy. Eight of these women had histories of fetal anomalies. It was observed that if the fetal anomaly was a spontaneous abortion there was no associated herpes gestationis, because the uterus was emptied before the stage of pregnancy in which this disease had its onset. It might be postulated that some cases of spontaneous abortion of unknown etiology are due to this syndrome of fetal anomalies and herpes gestationis. Only if these patients had future pregnancies extending beyond the period of gestation in which herpes gestationis has its onset could the diagnosis of the disease be made.

FIGURE 1. *Photograph Showing the Generalized Eruption, Consisting Mostly of Patches of Grouped Vesicles and Bullous Lesions, Which Dried Rapidly and Formed Crusts.*

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MEDICAL PROGRESS

RH AND OTHER BLOOD GROUPS (Concluded)*

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LABORATORY PROCEDURES IN BLOOD GROUPING

It must be emphasized at the outset that blood-grouping procedures are at present in an *imperfect state of development.* The tests are still dependent in all routine work on the phenomenon of red-cell agglutination. Although this is an extremely sensitive method, as many biologic tests are, it is somewhat unpredictable, being dependent on certain physicochemical and biologic factors. Red cells must be well preserved in serum or in the clot and relatively fresh (one to three days old is best although adequate preservation for several weeks is possible with respect to some of the antigens). The temperature, pH and concentrations of salt and protein must be controlled. Since the antibodies used for typing reagents may vary considerably in their activity (as pointed out in the discussion of anti-D) the conditions must be correct for the activity of the particular antibody. There is no one universally applicable technic.

In performance of blood-grouping tests it is imperative to follow in detail the directions furnished with the typing serum by the manufacturer. The importance of this statement cannot be overemphasized. The following procedures are applicable in general but must be modified to conform to the directions furnished with a typing serum.[5-8]

Reagents Required for Blood Grouping and Compatibility Tests

Suspensions of red cells. The following suspensions of red cells are required:

Red cells, *2 per cent by volume suspended in physiologic saline solution,* are used in the tube method for determination of the ABO group and the *tube method* for the compatibility test but should not be used in the slide test.

Red cells, *40 to 50 per cent by volume suspended in plasma or serum,* are required in the slide method for determination of the Rh group and the slide method for the compatibility test.

The *2 per cent suspension of red cells* can be made by the addition of 1 drop or more of blood for each 1 cc. of fresh, uncontaminated, physiologic saline solution. If the patient is anemic, several drops of blood are required to obtain a 2 per cent suspension. Red cells may be obtained from the following sources: capillary whole blood§; blood containing an anticoagulant; and clotted blood, by removal of serum containing red cells, or by separation of a fragment of the clot with a wooden applicator stick and agitation in a tube containing physiologic saline solution.

Fluid *blood with a hematocrit of 40 to 60 per cent* may be obtained from a sample that is clotted or one containing an anticoagulant. If there is anemia, the sample is concentrated by removal of plasma or serum to adjust the hematocrit approximately to 40 or 50 per cent.

Precautions. Red cells suspended in saline solution may lose their specific agglutinability during storage in the ice box and should not be relied upon after about twenty-four hours. In clotted blood, stored in the ice box, the red cells retain their agglutinability for many days.

Serums for grouping of blood and for compatibility tests. The following serums are required: anti-A and anti-B grouping serums; anti-D grouping serum for the *slide method*¶; serum from recipient and donor for the compatibility tests.

Anti-A and anti-B grouping serums are usually obtained from human donors of blood Groups B and A, respectively. Donors are selected that are known to have high concentrations of the isoagglutinin required. These serums are routinely used in the fluid state. Anti-A and anti-B grouping serums may also be prepared by immunization of rabbits; the serums are dried and used in powdered form.|| Anti-D grouping serum is obtained from immune *human* donors, since serums obtained by immunization of animals do not give consistent or reliable results. Serums

*Adapted from *A Syllabus of Laboratory Examinations in Clinical Diagnosis.* Printed by permission of the Harvard University Press.

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§Occasionally, a small fibrin clot forms in the suspension. The suspended cells can be washed by centrifugation and resuspended in physiologic saline solution. The fibrin may be removed with a wooden applicator stick.

¶The determination of Rh type can be done by the Landsteiner tube test, if proper saline-agglutinating serum (anti-D) is available. It is particularly important, when such a serum is used, to follow exactly the directions of the manufacturer.

||Details of this technic are not discussed here.

for the compatibility tests are obtained from clotted blood from the recipient and donor. Plasma is usually unsatisfactory as a substitute for serum.

Precautions. Grouping (typing) serums should never be used unless they are proved to be potent at the time they are used.* Anti-A and anti-B grouping serums should have a known high agglutination titer, showing strong agglutination of sensitive red cells when diluted to 1:64 or more with physiologic saline solution. Serums for the slide test should show a high avidity, as evidenced in producing *macroscopic* agglutination in one minute, when 1 drop of serum is mixed with 1 drop of cell suspension on a glass slide. Liquid grouping serums may be preserved indefinitely in the frozen state and will maintain potency for many months when stored at ice-box temperature provided there is no bacterial contamination. *Plasma should not be used in the compatibility tests* since it contains fibrinogen and *produces rouleaux formation* as observed microscopically.

Determination of ABO Blood Groups

Principle. The first step in the preparation for blood transfusion is to determine the ABO blood group of the recipient and of the donors, at least the first step of the following three procedures being used: anti-A and anti-B grouping serums of known potency are *always* used to determine the blood group of unknown red cells; the blood group, especially of Group O, may be confirmed by a test of the unknown serum from the recipient or donor with red cells of known Group A and Group B; the potency of anti-A and anti-B grouping serums may be checked qualitatively and quantitatively by a test with red cells of known Group A_2 and Group B, respectively.

For these tests, the *tube method of Landsteiner* is recommended as the standard procedure since it is rapid, reliable and simple, has a macroscopic end point of obvious agglutination and permits a large number of tests to be run simultaneously. It is superior to the *slide method*, which is not described here. The test tube should have an internal diameter of approximately 7 mm. Reagents are measured in drops, *separate* capillary pipettes for each of the *grouping serums being used.* One pipette, thoroughly rinsed in physiologic saline solution, may be used for the several suspensions of red cells. One drop of serum is added to the tube, and then 2 drops of a 2 per cent suspension of red cells. The tubes are agitated to mix the reagents, centrifuged† at 500 r.p.m. for one minute, and remixed gently to loosen the cells from the bottom of the tube, and the agglutination is read macroscopically.

*The potency of serum is readily checked as described below.

†The tubes are *not* incubated and can be centrifuged immediately.

Tubes showing *no* macroscopic agglutination are read microscopically for agglutination by transfer of a small drop to a glass slide.

Method for determination of the ABO blood groups. The tests listed in Table 10, by the tube method of Landsteiner, are *always required* for *every* blood grouping.

TABLE 10. *ABO Grouping with the Use of Known Antiserums (Standard Method).*

GROUPING SERUM OF KNOWN POTENCY	2 PER CENT SUSPENSION OF RED CELLS TO BE GROUPED
1 drop	
Anti-A	2 drops
Anti-B	2 drops

Interpretation. The interpretation is as follows:
No agglutination (macroscopic or microscopic) indicates blood Group O.
Agglutination only with anti-A serum indicates blood Group A.
Agglutination only with anti-B serum indicates blood Group B.
Agglutination with *both* anti-A and anti-B serums indicates blood Group AB.

Method for confirmation of blood group with the use of unknown serum. It is desirable to confirm the blood group by a test of the serum from the recipient or donor as listed in Table 11, red cells of known‡ Groups A_1 and B, preferably from D-negative persons, being used.

These particular tests should *not* replace the standard method of blood grouping described above, since the agglutinins in serums from unknown patients are often low in potency, and occasionally absent.

TABLE 11. *Typing of Unknown Serum with the Use of Known A_1 and B Cells.*

UNKNOWN SERUM TO BE TESTED	2 PER CENT SUSPENSION OF RED CELLS OF KNOWN BLOOD GROUP
	2 drops
1 drop	Group A_1
1 drop	Group B

Interpretation. The interpretation is as follows for the blood group of the unknown serum:
Agglutination* of both Group A_1 and Group B cells indicates blood Group O.
Agglutination* of Group A_1 cells only indicates blood Group B.
Agglutination* of Group B cells only indicates blood Group A.
No agglutination (macroscopic or microscopic) and no hemolysis indicates blood Group AB.

*Occasionally, hemolysis occurs. When specific, hemolysis is equivalent to agglutination, but may be caused, nonspecifically, by bacterial or chemical contamination or by improperly cleaned test tubes.

Method for checking the potency of grouping serums The grouping serums to be tested can be examined qualitatively as described above in the description of the method for the confirmation of blood group, 2 per cent suspensions of known Group A_2B or Group A_2 and Group B cells, respectively, being

‡Physicians and laboratory personnel are advised to determine and record their blood groups for ABO and Rh, to make available at all times red cells of known groups for laboratory tests. The donors of these A and B test cells should be Rh-negative (cde/cde) if possible, and the donor of A cells should be of the subgroup A_1.

used. The potency of grouping serums can be tested *quantitatively* by a preparation of serial dilutions of 1:10 to 1:160 or higher and the addition of equal quantities of a 2 per cent suspension of agglutinable red cells from Group A_2 or Group B. The maximum dilution of the serum that produces macroscopic agglutination of an equal quantity of cell suspension is taken as the end point to express the potency or titer of the serum.

False-negative agglutination. A dangerous error in blood grouping results from the failure to obtain agglutination when it should have occurred. The major cause of false-negative agglutination is *weakness* of the grouping serum.[6] Another cause is the use of old cells that are not agglutinable because of long standing.[8] Fluid grouping serum may deteriorate from standing in the room or from bacterial contamination. The most frequent error occurs from the use of anti-A grouping serum of inadequate potency. In this instance, no agglutination may occur with blood of Group A_2, and the blood group may be reported erroneously as Group O or B. This has occurred.[34] Such blood, when given to a Group O recipient has resulted in a fatal hemolytic transfusion reaction. Bloods of Group A_2 and Group A_2B are particularly subject to false-negative reactions since the antigen A_2 is significantly less agglutinable than the antigen A_1. A *potent anti-A grouping serum* will agglutinate red cells of Group A_1 and A_2 as well as A_1B and A_2B. A weak anti-A typing serum may *fail* to agglutinate A_2 cells. It is *not* necessary in the clinical use of transfusions to determine the subgroups of Group A, but it is *obligatory* that the anti-A typing serum be *potent enough to agglutinate the subgroups of Group A*. In addition, *the compatibility test cannot be relied upon to detect errors arising from weak grouping serums* for the following reasons: the agglutinin titer of the serum obtained from most persons tested is *lower* than that of a proper typing serum; and a false negative compatibility test has resulted[34] when weak typing serum also failed to produce agglutination.

False-positive agglutination, rouleaux formation and cold agglutinins. False-positive agglutination should be suspected immediately if the major compatibility test by the tube method shows unexpected agglutination *and the blood grouping has been checked.* If this occurs, the recipient's red-cell suspension should be tested with the recipient's *own serum*, by means of the same technic as for the major compatibility test. If agglutination occurs in this test, it may be due to rouleaux formation or autoagglutination and should be analyzed, since this serum may agglutinate all cells tested. Rouleaux formation of varying degree is *always* seen microscopically when cells are suspended in *plasma*.[35]

Plasma should never be used for a compatibility test requiring interpretation by microscopical examination. In serum, rouleaux formation occurs as the result of hyperglobulinemia. The formation of *rouleaux* is characteristic in its appearance, nonspecific in affecting all red cells, nonabsorbable and readily decreased or eliminated by dilution of the serum 1:2 or 1:4 with physiologic saline solution. *Rouleaux formation is not a contraindication to transfusion with the cells tested.*

Cold agglutinins may cause autoagglutination and panagglutination of all cells even at room temperature.[36] Red cells from a patient with cold agglutinins may show agglutination with anti-A and anti-B grouping serums owing to adsorbed cold agglutinins and may thus appear to be Group AB. The red cells may be freed of cold agglutinins by washing three or more times in a large volume of warm physiologic saline solution. The cold agglutinins are nonspecific and adsorbable at low temperatures and may cause agglutination at room temperature that is reversed at 37°C. Cold agglutinins are not a contraindication to transfusion. Rarely, autoagglutinins, other than cold agglutinins, are observed that produce agglutination at temperatures between 4 and 37°C. Occasionally, suspensions of blood infected with bacteria develop a panagglutination.[8] This complication can be avoided by the use of fresh suspensions of red cells made from uncontaminated blood samples preserved in the icebox. Cold agglutinins found in a person's serum may be *specific* isoantibodies (anti-M, anti-P, anti-Lewis and so forth) — if so they will fail to agglutinate his own red cells.

Determination of the Rh Blood Group

Principle. For routine transfusion therapy it is essential to determine whether the blood is *D-positive* (85 per cent of the population) or *D-negative* (15 per cent of the population). The *slide method* is recommended since it is rapid and gives a strong macroscopic agglutination that provides a definitive and reliable end point.

Anti-D grouping serum for the slide method cannot be used for cells suspended in saline solution since no agglutination may occur; the cells must be suspended in a protein* medium. This grouping serum is usually labeled anti-Rh (anti-D) grouping serum "for slide test (hyperimmune)." It is a hyperimmune human serum, inactive in saline solution, that contains incomplete antibodies and may contain blocking† antibodies. It produces vigorous agglutination of red cells, in 40 to 50 per cent concentration, that are suspended in *protein solutions*, such as plasma, serum and albumin.

The anti-D grouping serum is obtained from immunized human donors. The naturally occurring anti-A or anti-B agglutinins in these serums are

*Two per cent by volume of red cells, suspended in the patient's own *serum* or in *albumin* solution (human or bovine), can be used with this anti-Rh serum in the tube method. The important factor is the presence of a sufficient *concentration* of protein.

†Blocking antibodies will inhibit the agglutination, in the test tube, of red cells that are mixed with serum known to agglutinate D-positive cells. The blocking phenomenon has not been observed with the slide-test technic using a 50 per cent cell suspension in serum or plasma.

adsorbed or neutralized, leaving only the anti-D agglutinin.[6, 37] Thus, the anti-D grouping serum agglutinates *D-positive* red cells, but does not agglutinate D-negative red cells, whether of Group O, A, B or AB.

Slide method for Rh grouping.[38] A 0.2-cc. sample of blood, with a hematocrit of 40 to 50 per cent, is transferred to a glass slide. Then 0.1 cc. of anti-D grouping serum for the slide method is added. The blood and the typing serum are mixed over an area about 2.5 cm. square, with a wooden applicator, the mixture being spread over the whole width of the slide and the ends of the film squared off. The resulting film should not be very heavy, but must not be so thin as to dry too quickly. The mixture is tilted back and forth on an illuminated ground-glass background that is warmed to about 40°C. by the heat from an electric bulb. Agglutination is read, *only macroscopically*, after a period of 1 to 3 minutes of occasional tilting. The result should be compared to known D-positive and D-negative bloods set up in the same manner. Tests must be read *before drying* since a negative test may appear quite granular when dry. If drying occurs too rapidly for easy performance of the slide test owing to excessive dryness of the air a drop of bovine albumin solution* or of human albumin solution (20 to 25 gm. of salt-poor albumin per 100 cc. of physiologic saline solution) may be added after the slide has been exposed for thirty to sixty seconds. This addition of albumin usually enhances the agglutination if it is going to occur. Technically, it is advisable to add the drop of albumin to the top edge of the blood mixture while the slide is slightly tilted and to watch the drop as it goes down through the blood mixture before the slide is tilted again. Agglutination, if it is to occur, usually is instantly apparent in and around, and in the wake of, the drop of albumin.

Interpretation. The result is reported, the variety of anti-D serum used being stated. If agglutination is observed, it is reported as D-positive. If *no* agglutination is observed, it is reported as D-negative. It is advisable to use more than one potent anti-D serum. If enough different serums were used in parallel, one would not overlook as many of the irregular, and important but uncommon, D antigens discussed previously. False-negative results may be expected with some regularity in the newborn baby (D-positive) with erythroblastosis fetalis. If the cells of the baby are completely coated with "blocking" antibody from the mother, they may fail to agglutinate in typing serum but may give a strongly positive direct Coombs test. Otherwise, there is no greater difficulty in typing of the blood of the newborn baby than that of an adult, provided the typing serums are potent and from human sources rather than animal. Carefully obtained samples of blood from the placental end of the umbilical cord are satisfactory for typing purposes.

*Supplied by Armour Laboratories, Chicago, Illinois.

Compatibility Tests

Compatibility tests are essential to avoid errors in blood grouping, and especially to detect abnormal or immune agglutinins in the serum of the recipient. It is recommended that *three compatibility tests be done before each transfusion* — that is, two by the tube method and one by the slide method.

Tube method. By means of the Landsteiner tube method, the compatibility tests shown in Table 12 are set up.

Slide method. It has been demonstrated[38] that the slide method will detect the presence of hyper-

TABLE 12. *Compatibility Test, Major and Minor, by the Tube Method,* with the Use of Saline Solution.*

Origin of Serum	Origin of Red Cells†	Comment‡
1 drop	*2 drops*	
Recipient	Donor	Major compatibility
Donor	Recipient	Minor compatibility

*The tubes are incubated at 37°C. for ten or fifteen minutes, centrifuged for one minute at 500 r.p.m. and read.

†Two per cent suspension in saline solution.

‡Lack of agglutination indicates compatibility.

immune anti-Rh isoagglutinins. Thus the slide test serves as a simple test for the detection of dangerous incompatibilities that might cause a fatal hemolytic transfusion reaction. The compatibility test by the tube method usually will not detect the presence of anti-Rh agglutinins since it fails to detect the hyperimmune antibodies. The method is as follows:

A sample of 0.2 cc. of the donor's oxalated whole blood, with a hematocrit of 40 to 50 per cent, is transferred to a glass slide and 0.1 cc. of serum from the recipient is added as described above. The slide is read only macroscopically. If agglutination occurs, the blood is judged incompatible. Such incompatibility in this test may be due to anti-A or anti-B agglutinins, anti-Rh agglutinins or agglutinins other than anti-Rh. The test is designed primarily to detect hyperimmune anti-Rh agglutinins. A control for comparison is *always necessary*, by the use of 0.1 cc. of the *donor's* serum or plasma, mixed with 0.2 cc. of the *donor's* blood.

Interpretation of compatibility tests. The compatibility tests *in saline solution* serve as a crude check on the accuracy of the determination of the blood group of donor and recipient. Agglutination is reliable evidence of the presence of an agglutinating agent that may be effective in vivo[20, 38, 39] and

may contraindicate the transfusion. A negative result does not necessarily exclude an agglutinin that may produce a hemolytic transfusion reaction[34, 39]; no agglutination may occur with weak anti-A antibody or hyperimmune Rh antibodies.

The *compatibility test* in a saline-free protein medium (slide test) will usually detect the presence of a hyperimmune antibody that gives no agglutination in a saline medium. This screening test serves (when agglutination occurs) as a major warning that incompatibility exists and that transfusion is contraindicated until the isoantibody is identified.

Even when all cross-match tests described above show no agglutination it is still not certain in all instances that no abnormal antibodies exist in the patient's (or donor's) serum that could cause a transfusion reaction. A list of the isoantibodies that may be encountered in serum is shown in Table 13. The Coombs tests, described below, serve as further methods for testing of compatibility by the detection of antibodies on red cells and in serum.

TABLE 13. *Types of Isoantibodies That Have Been Encountered in Human Serums.*

ANTIGENS	NATURAL ANTIBODIES	IMMUNE ANTIBODIES			
	SALINE AGGLUTININS (MOST ACTIVE IN THE COLD)	SALINE AGGLUTINATING 37°C.	ACTIVE IN SERUM OR PLASMA*	ACTIVE IN ALBUMIN†	DEMONSTRABLE ONLY BY INDIRECT COOMBS TEST
A, B	Universal	+	+	−	−
O	+ (rare)	−	−	−	−
D	0	+	−	+	+
C, E, c, C^w	0	+	−	+	−
e, d	0	+	−	−	−
M, N	+ (rare)	+	−	−	−
S	0	+	−	−	+
P	+	+	−	−	−
Lewis	+	+	−	−	−
Kell	0	+	−	+	+
k	0	+	−	−	−
Lutheran	0	+	−	−	−

*Not in saline solution or albumin.
†Not in saline solution.

Coombs Tests and Test with Serum Albumin for Isoantibodies on Red Cells

It has been amply demonstrated that *red cells* may be coated with antibody globulin in certain instances but fail to agglutinate when suspended in saline solution.[6, 20-23, 38, 40, 41] This occurs, for example, for D-positive red cells coated with hyperimmune anti-D isoantibody,* as in the erythroblastotic infant. Coating of red cells without agglutination in saline solution or serum has been demonstrated in certain patients with acquired hemolytic jaundice[42-45]; in this instance the isoantibody is of unknown origin and is not related to any blood group. Conversely, the *serums* of certain patients contain isoantibodies that will not produce agglutination of red cells suspended in saline solution, although the antibody will transfer to red cells, coating them. For example, at least three different isoantibodies can be so transferred to normal red cells — namely, the hyperimmune anti-D antibody, the antibody in serums from patients with acquired hemolytic jaundice and the hemolysin from patients with paroxysmal (cold) hemoglobinuria.[45]

Two different methods are available for the detection of antibody on sensitized but unagglutinated red cells: the use of an antihuman globulin serum (the Coombs test[46]) and the addition to saline-free red cells of a solution of albumin or other plasma proteins.[22, 47]† In both tests the production of agglutination in the unagglutinated suspension indicates the presence of antibody on the red cell. The Coombs test is remarkably *sensitive* in the detection of small degrees of sensitization, and it is nonspecific since agglutination occurs with a variety of antibodies. The test with albumin solution is also nonspecific but is less sensitive and may be negative when the Coombs test is strongly positive.

The *value of the Coombs test in blood grouping* is immediately apparent from its sensitivity and nonspecificity in the detection of antibodies already present on red cells or the detection of antibodies that are transferred from serum to normal red cells. Although antibodies may *not* produce agglutination in saline suspensions of red cells they may cause agglutination and a severe hemolytic transfusion reaction in vivo, in the transfusion of D-positive red cells into a patient with hyperimmune anti-D isoantibody in the serum. Thus, the Coombs test has an important place in the testing for compatibility in certain instances of isoimmunization.

The Coombs test. Coombs, Mourant and Race,[46] in 1946, produced an immune antiglobulin serum in rabbits by the repeated injection of human serum or gamma globulin of human serum (not red cells). When this serum was adsorbed by washed normal human cells, it produced no agglutination of normal washed red cells in saline solution but did agglutinate previously unagglutinated suspensions of red cells coated with human isoantibodies. The procedure known as the *direct Coombs* test is performed by the incubation of equal parts of Coombs's serum and of a suspension of red cells washed in saline solution (unknown cells). In the procedure known as the *indirect Coombs test*, a serum is tested for the presence of antibody by incubation, in the serum, of selected normal red cells; the red cells are then washed in saline solution and tested for adsorbed antibody using antiglobulin serum as in the direct Coombs test.

*The D antigen and antibody are most commonly involved in isoimmunization, but other antigens of the CDE system are occasionally the cause of immunization.

†This is comparable to the slide-test methods for detection of D-positive cells or of anti-D isoantibody, since both procedures avoid the use of saline solution and employ protein-rich mediums of plasma or serum.

Method for direct Coombs test. Two drops of a 2 to 4 per cent saline suspension of red cells from the patient to be tested are placed in a small, clean test tube (8 by 70 mm.). The tube is filled with uncontaminated saline solution by means of a clean pipette, the saline solution being introduced forcibly to disperse the red cells in the fluid. The tube is centrifuged rapidly for one or two minutes, and the supernatant saline solution is poured off. The cell button is then examined. If gross agglutination of the red cells is present, washing must be continued until spontaneous agglutination has been eliminated. If the cell button resuspends easily without gross clumping, the following steps are performed.

The *washing* is *repeated* at least twice more, the cell button being shaken up by tapping before the fresh saline solution is added. Extreme precautions about cleanness of glasswear and saline solution are necessary to avoid unintentional introduction into the test tube of even minute amounts of human serum, which would be sufficient to neutralize the antiglobulin reagent when added. For the same reason, the tubes should not be inverted for mixing, since such a procedure involves the use of a potentially serum-contaminated finger or cork.

After three or four washings the cells are checked for agglutination and finally resuspended in saline solution to make approximately a 5 per cent suspension. An unagglutinated suspension of red cells is required for the Coombs test since the end point of the test is the presence or absence of agglutination. One or two drops (depending on potency) of Coombs's antiglobulin reagent are added, and mixed by gentle shaking. The tube is allowed to incubate* for thirty to sixty minutes at 37°C.; it is then centrifuged at 500 r.p.m. for 1 minute and the cells are examined for agglutination. A "positive test" is evidenced by agglutination of the red cells, which may be a solid agglutinated cell button, lesser degrees of macroscopic agglutination, or only microscopical agglutination. As a control, a tube containing the washed suspension of cells (but no Coombs's reagent) is incubated and should show no agglutination. Agglutination with Coombs's reagent indicates that globulins had been absorbed onto the red cells and were firmly enough fixed to withstand washing.

Method for indirect Coombs test. Two drops of a 2 to 4 per cent suspension of the donor cells in saline solution are mixed with two drops of the recipient's serum in a chemically clean test tube (8 by 70 mm.). The mixture is incubated at 37°C. for at least thirty minutes, centrifuged at 500 r.p.m. for one minute and examined for agglutination of the red cells. (It should be noted that so far the technic is that of the "major" cross match.) Agglutination at this point concludes the test, since nothing further is to be gained by the Coombs method. If no agglutination is present, the test is completed by performance of the steps described for the direct Coombs test, by the addition of the anti-globulin serum to the donor's washed cells.

Albumin test. Red cells suspected of having adsorbed hyperimmune antibodies, which failed to agglutinate them, in saline solution, after incubation at 37°C. for thirty to sixty minutes are freed of saline solution after centrifugation and are resuspended in a solution of albumin (human or bovine, 20 gm. per 100 cc. of physiologic saline solution). Compatible plasma, serum or mixtures of albumin with serum or plasma may also be used. After standing for fifteen minutes, the tubes are centrifuged for one minute at 500 r.p.m., and the cell button is examined for agglutination. Doubtful or negative reactions are checked microscopically.

Limitations and interpretations. A failure of sensitized cells to agglutinate in the Coombs test (false-negative reactions†) may result from weak antiglobulin serum or contamination of the test mixture with serum that may neutralize the Coombs serum. A false-positive agglutination may result from cold autohemagglutinins that were not removed by washing or from poor preparation (incomplete adsorption of nonspecific agglutinins for human red cells) of the Coombs serum. It is imperative that in the performance of the Coombs test, the suspensions be mixed by agitation of the tubes rather than by mixing against the finger, which may be contaminated with protein. Also,

*Some antiglobulin serums are potent enough for centrifugation to be done immediately.

†A control observation should be made to prove the effectiveness of the procedure and of the Coombs serum. This is done by the indirect Coombs test using known D-positive red cells and known hyperimmune anti-D isoantibody for sensitization. These cells should give no agglutination after washing but should show marked agglutination when treated with Coombs's serum.

glassware and solutions must be chemically and bacteriologically clean.

A *positive direct* or *indirect Coombs test* (agglutination occurring only after addition of antiglobulin serum) or a positive *albumin test* indicates the presence of an antibody on the red cell but does not indicate the kind or source of the antibody except when anti-D isoantibody is suspected or known to be present. In the presence of the anti-D isoantibody, transfusion with D-positive cells is contraindicated. In the presence of a serum antibody in acquired hemolytic jaundice, transfusion is *not* contraindicated but the transfused cells may be rapidly sensitized and destroyed in vivo.[43] Positive direct or indirect Coombs tests have generally not been obtained in cases in which immune anti-A or anti-B isoantibodies are involved.

Gardner[43] has confirmed the fact that certain cases with *acquired hemolytic jaundice* show agglutination of the red cells in the direct Coombs test; in these cases the serum contains an antibody that may cause agglutination of normal red cells and a positive indirect Coombs test only when the pH of the serum is adjusted to 6.8.

Identification of Isoantibodies

The detection of isoantibodies has been discussed. The identification of the isoantibodies that may be found in transfusion reactions and in erythroblastosis fetalis cannot be described adequately here, except for the identification of anti-D antibodies (see Tables 4 and 13). In general, an unknown serum is tested for agglutination with red cells from at least 2 D-positive and 2 D-negative Group O subjects. The isoantibodies may be "complete" (giving agglutination in saline solution) or "incomplete" (hyperimmune) (giving agglutination only in saline-free protein medium), or may be a mixture of both "complete" and "incomplete" antibodies. Accordingly, suspensions of red cells are set up both in saline solution and (after removal of the solution) in albumin solution.

The detection of hyperimmune anti-A or anti-B requires special care. Use can be made of Witebsky's[5] observation that these antibodies are difficult to neutralize with the corresponding specific soluble antigen. A sufficient amount of the dilute solution of A and B substances (0.1 per cent, Sharp and Dohme), usually 1 to 2 parts, is added to the native serum to neutralize, completely or nearly, the saline-active antibody, as determined by titration in a saline system. This "neutralized" serum can then be tested in a serum system (using, for example, serum and cells from a Group A person for the dilution of, and testing of, the serum suspected of containing hyperimmune anti-A), by successive dilutions with compatible human serum and the use of a 2 to 4 per cent suspension of known cells in serum. The hyperimmune A and B antibodies are inactive in saline solution, and usually also in bovine as well as human albumin. Wiener[48] has found a buffered solution of acacia useful as a suspension medium. Group A_1 red cells should be used in the titration of a suspected hyperimmune anti-A, since the titer may be much lower against Group A_2 cells, or even absent, after the addition of the soluble antigen.

Trypsin as an Aid in Agglutination Technics

The use of trypsin in blood-grouping technics has been reported by Morton and Pickles[49] and studied extensively by others.[50-52] Exposure of normal red cells to a dilute solution of trypsin alters them so that they are immediately agglutinated by hyperimmune (or blocking) antibodies when suspended in saline solution. The use of trypsin or other appropriate enzymes to treat red cells promises to aid blood-grouping procedures by great simplification. The exact technics have not had wide enough trial to be recommended for routine use.

Summary

Seven blood-group systems are described, comprising at least 20 separate and specific blood-group antigens. All are of very great importance in the fields of genetics, anthropology and legal medicine. At least 10 have been found responsible for cases of erythroblastosis fetalis. These same 10 have been found responsible for hemolytic transfusion reactions.

Although there is much confusion regarding the blood groups, they are simple enough to understand when considered one by one, which is usually possible in clinical practice. The chief difficulty consists of considerable variability in the types of circulating antibodies, which may occur naturally or may be produced by active immunization against any one of the blood-group antigens. This variability makes necessary, in the present imperfect

state of technical procedures, a considerable battery of different testing methods. The principles, and essential technical details, of the important methods now in use are discussed.

Information essential to the understanding of what is presently known about the blood groups and their isoantibodies is included. The problems of erythroblastosis fetalis and hemolytic transfusion reactions are relatively clear cut so far as the A, B and D (Rh_o) antigens are concerned. Clinical problems caused by other antigens and antibodies are usually easily solved by any one of a number of laboratories specializing in this work.

Even though they seem complicated, the blood groups are of such practical importance that every practicing physician who is responsible for transfusions, who deals with obstetric problems or who cares for newborn babies should have a fair knowledge of the basic concepts of blood-group incompatibility, in order that he may avoid serious risks to his patients, and be prepared to treat promptly the results of antigen-antibody reactions involving the blood-group factors.

In the process of preparation of this material for the *Syllabus of Laboratory Examinations in Clinical Diagnosis*, the manuscript was edited, criticized, changed and otherwise manipulated by a large number of persons, in particular, Dr. T. Hale Ham, who is largely responsible for its having been undertaken at all. Dr. R. R. Race, of London, kindly reviewed the manuscript in its final stages.

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Correction. In Table 1 of the Medical Progress report "Laboratory Data in Clinical Medicine: Units of Measure, Costs, and Quantitative Significance of Results" by Dr. Thomas Hale Ham, which appeared in the September 29 issue of the *Journal*, the line reading "1 cubic millimeter (mm^3) = 1,000 cubic microns" should be corrected to read "1 cubic millimeter (mm^3) = 1,000,000,000 cubic microns."

MASSACHUSETTS MEDICAL SOCIETY

PROCEEDINGS OF THE COUNCIL

Stated Meeting, October 5, 1949

A STATED meeting of the Council was called to order by the President, Dr. Arthur W. Allen, on Wednesday, October 5, 1949, at 10:30 a.m. in John Ware Hall, Boston Medical Library, 8 Fenway, Boston.

Two hundred and forty-one councilors were present (Appendix No. 1).

The Secretary, Dr. H. Quimby Gallupe, presented the minutes of the Council meeting of May 23, 1949, as printed in the *New England Journal of Medicine*, issue of July 21, 1949, and moved their acceptance. The motion was seconded, and it was so voted.

The President then read the following obituaries:

HAROLD GERARD GIDDINGS. — Dr. Harold Gerard Giddings died at his home on May 28, 1949. He was born in Gardiner, Maine, on March 23, 1880. He graduated from Harvard College in 1901 and from Harvard Medical School in 1907. After a surgical internship at the Massachusetts General Hospital, he took up general surgical practice in and around Boston. Dr. Giddings was chief of surgery at the Whidden Memorial Hospital in Everett from 1936 to 1947 and chief of the surgical outpatient department at the Massachusetts General Hospital from 1943 to 1946. During summer months he practiced surgery in Falmouth, Massachusetts. In World War I, he served as a lieutenant colonel in the National Guard and commanded a Massachusetts Relief Expedition at the time of the Halifax explosion. In World War II, he was a selective-service-board physician. He was always actively interested in the affairs of the Society, serving on the procurement and assignment committee of Middlesex South District Medical Society and as president from 1943 to 1945. At the time of his death he had just finished his term as chairman of the Committee on Arrangements. It was fortunate that he was able to attend the annual meeting of the Society in Worcester and to observe the appreciation of the fine program for which he devoted so much time and effort.

He was a fellow of the American College of Surgeons.

Dr. Giddings loved his native state; he was an ardent fisherman and enjoyed his visits to Maine as a delegate to the Maine State Medical Society.

HENRY ASHTON ROBINSON. — Dr. Henry Ashton Robinson died suddenly at his home in Hingham on August 21, 1949, in his sixty-third year.

He was born in Hingham in 1887, attended the Hingham public schools and graduated from Harvard College in 1908 and Harvard Medical School in 1911.

After practicing for several years in Marlboro, he was commissioned a first lieutenant in the United States Army in World War I and served in France with the 303rd Sanitary train of the 78th Division and was discharged as captain at the close of the war.

In 1919 he settled in Hingham for the practice of medicine and was there until his death. He was school physician for twenty-seven years and held other positions in social and business affairs of his town.

He became a member of the Massachusetts Medical Society in 1914 and of the Norfolk South District Medical Society in 1919. He was a member of the Council from his district from 1938 to 1941 and from 1946 to 1949. He was vice-president of the Norfolk South District Medical Society in 1943 and president in 1944 and 1945. He was a member of the Committee on Public Relations from 1946 to 1949.

In 1946 he was appointed to the Norfolk South District Committee to co-operate with the boards of public welfare and in 1947 was appointed chairman of the Norfolk South District Committee on School Medical Services.

In January, 1948, he was appointed chairman of the Norfolk South District Committee of Professional Service Committee (Blue Shield). He was chairman of the Committee to organize a woman's auxiliary in this district.

In 1949 he was appointed by Dr. Belding a member of the Norfolk South District Legislative Committee. He was a delegate two years ago to the meeting of the American Physicians Committee, after which he was active in planning a program for the Massachusetts Medical Society.

His death leaves a vacancy in our ranks and we all realize that we have lost a tireless worker for the best interests of the Society.

At the request of the President, the Council stood in silent tribute to the departed fellows.

The President then announced the following interim appointments, which were approved by the Council:

Committee on Code for Publicity:

Donald Munro, *Chairman*
Charles C. Lund
John F. Conlin
Leroy A. Schall
Ralph R. Stratton

Committee on Pilot Clinics:

John J. Poutas, *Chairman*
Brooks Ryder
Sidney Cobb
George Dunlop
Alfred L. Frechette

In addition to the following representatives from the districts:

Julius G. Kelley
George S. Reynolds
William M. Stobbs
Aubrey J. Pothier
Elmer S. Bagnall
Albert E. Parkhurst
Spencer Flo
Allen S. Johnson
Edward J. Manwell
Robert E. Archibald
Samuel A. Dibbins
John J. Poutas
Alfred L. Frechette
Henry F. Howe
Donald Martin
Brooks Ryder
George Dunlop
Sidney Cobb

President Allen then made the following remarks:

The Committee to study the problem of professional-service fees in the State was ordered by the Council at its last meeting to consist of 18 members — that is, one theoretically from each district. In going over this problem, it seemed that it might serve a better interest for the Society if, in addition to these 18 men representing the various districts, we had a central executive committee representing the various specialties in medicine. I will

have to ask the Council to approve of this action on the part of the President, to make this change in the ruling, and the executive committee that we recommend is as follows:

Richard H. Sweet, *Chairman*
George Prather
Leroy Schall
William Beetham
Christopher Duncan
Theodore Badger
Samuel Robins
Leo V. Hand
Richard I. Smith
Donald Munro
William T. Green

As representing the various districts, it seemed that the already appointed chairmen of Blue Shield district professional service committees would be best able to represent the Society as a whole. I will not read their names, unless you choose, but they have been previously appointed as such.

The two vacancies on the Council were filled as follows:

Dr. Daniel B. Reardon — to replace Dr. Henry A. Robinson as public-relations councilor from Norfolk South.

Dr. Joseph A. Holmes — to replace Dr. Harold G. Giddings on the Council from Middlesex South.

Reports of Committees

Executive Committee — Dr. H. Quimby Gallupe, Middlesex South, *Secretary*.

The Secretary submitted the report of the Committee (Appendix No. 2), which met on September 7, 1949, at the Hotel Kenmore.

Under new business of the committee, the Secretary moved that the Council recommend to the Committee on By-laws and Council Rules that the by-laws be so changed that there shall be no fewer than six councilors elected from each district. The motion was seconded, and it was so voted without discussion.

The Secretary then moved that the President be asked to appoint a committee of 18 representing the district societies to study the problem of redistricting and councilor representation and, further, that an executive committee of not more than 7 members of the committee be appointed with power to act for the committee. The motion was seconded.

Dr. Basil E. Barton, Norfolk, moved that the motion be amended by changing the words "have power to act for the committee" to "for this purpose."

The motion to amend was seconded, and it was so voted. The President then called for a voice vote on the main motion, and it was carried unanimously.

Dr. Allen then spoke as follows:

May I now present to the Councilors a committee that we suggest to do this study concerning redistricting, and the number of councilors? It seemed to Dr. Gallupe and to me and to some others with whom we discussed this problem, that perhaps the secretaries of the various district societies would be the logical people to serve as a committee of 18 to study this problem. So we recommend the appointment of the secretaries of the various district societies.

I shall not read them all unless you request it, but I will read the committee of 7 who were selected as the executive committee, being those we considered centrally enough located to handle the problem from the standpoint of the metropolitan area, and they are as follows:

Dr. Charles G. Shedd, *Chairman*
Dr. Alexander A. Levi
Dr. Basil E. Barton
Dr. Donald Hight
Dr. Milton M. Sisson
Dr. Harold R. Kurth
Dr. Roy W. Layton

Dr. Ralph Stratton, Middlesex East, stated that Dr. Roy Layton had resigned as secretary of Middlesex East District Medical Society and that his successor had not yet come to function. Dr. Allen said that correction would be made.

A motion was made to approve the appointments, and it was seconded and so voted.

The Secretary then moved that the American Medical Association be invited to hold its Interim Clinical Session in Boston after 1950. The motion was seconded, and it was so voted.

The Secretary proposed that the choice of the Executive Committee for the American Medical Association's General Practitioner Award for 1949 had been made and that President Allen might well tell the Council about their candidate. Dr. Allen Spoke as follows:

I feel that we are particularly fortunate in this state in having so many men who could qualify in this capacity. I believe that the Executive Committee gave very careful consideration to the three suggestions that were brought forth by three separate districts and it was felt that any one of these men would certainly have done credit to Massachusetts.

The vote, however, fell to one who is so well known to every man and woman who is a member of the Massachusetts Medical Society that I believe we should feel greatly honored to have him represent us. It is my hope that the entire Society in every conceivable way will back this candidate to the fullest of our abilities. We want him to win. We want him to bring this honor back to Massachusetts.

I will ask this candidate to rise, so that you will know personally he is still here and alive, and it looks as though we might win — Dr. Elmer S. Bagnall!

Committee on Public Relations — Dr. Harold R. Kurth, Essex North, *Secretary*.

Dr. Kurth submitted the report as printed (Appendix No. 3). He then moved the approval of the first recommendation, that there be held a medical-press-radio conference some time in the latter part of October, 1949. The motion was seconded, and it was so voted.

Dr. Kurth then moved that the proposed health exhibit, which was to have been held in the fall of this year, be indefinitely postponed. The motion was seconded, and it was so voted. Dr. Kurth then spoke as follows:

The third recommendation was that the Council empower the Committee on Public Relations to award to some layman or group of laymen a citation for outstanding service to the medical profession, and that secondly, the Committee on Public Relations shall not make more than three such citations annually.

This recommendation was discussed in the Executive Committee, and apparently approved in principle, but not voted upon. It was suggested by the Executive Committee that the following recommendation replace that of the Committee on Public Relations:

> That the Council shall establish a Massachusetts Medical Society citation to be awarded to a layman or a group of laymen for outstanding contributions to medical progress. Not more than three awards shall be made in any one year. The recipients shall be selected by a Committee to be designated by the President.

Also, the Executive Committee recommended that that citation should bear a name, and that the name should be the Lemuel Shattuck Award. I move you the adoption of the recommendation as presented by the Executive Committee.

The motion was seconded.

Dr. Barton, Norfolk, spoke as follows:

> The following remarks concern the naming of the award only. The presentation of the award as planned is an effort to improve relations between the Massachusetts Medical Society and the public, and in that respect it differs from some functions within the Society that bear the name of individuals, like the Cotting Lunchon.
>
> If this citation is called by the name of an individual, it will gradually be referred to in the newspapers and elsewhere only by that name, and the Society's interest in it will be forgotten. Norfolk District Medical Society feels that when from time to time this award is made, it will emphasize the Massachusetts Medical Society's part in seeking out the recipient if the award is made in the Society's name.
>
> We therefore recommend that the layman's award or citation bear the name "The Massachusetts Medical Society Citation for Outstanding Contributions to Medical Progress." I move the adoption of this recommendation.

This amendment was seconded.

Dr. John Fallon, Worcester, said that the Executive Committee believed that more publicity would be obtained by placing the name of Lemuel Shattuck on the citation. Mr. Shattuck was a layman who had produced one of the most important public-health documents.

The President called for a show of hands on Dr. Barton's amendment and declared that it was so voted. He then called for a voice vote on the main motion as amended and declared it so voted.

Dr. Kurth then moved the approval of the whole report as amended. The motion was seconded, and it was so voted.

Committee on Tax-Supported Medical Care — Dr. Albert A. Hornor, Suffolk, *Chairman.*

Dr. Hornor submitted the report (Appendix No. 4) as informational and moved its acceptance. The motion was seconded, and it was so voted.

Committee on Legislation — Dr. David L. Belding, Norfolk South, *Co-Chairman.*

Dr. Solomon L. Skvirsky, Norfolk, presented the report (Appendix No. 5) as informational and moved its acceptance. The motion was seconded, and it was so voted.

Subcommittee on National Legislation — Dr. Charles G. Hayden, Middlesex South, *Chairman.*

Dr. Hayden presented the report as printed (Appendix No. 6) and mentioned the typographical error that had been corrected by the Executive Committee. He moved the acceptance of the informational report as corrected. The motion was seconded, and it was so voted. Dr. Hayden said Reorganization Plan No. 1, mentioned in the report, had been defeated in the Senate.

Standing Committees

Committee on Arrangements — Dr. Franklin G. Balch, Jr., Suffolk, *Chairman.*

The Secretary presented the report for Dr. Balch (Appendix No. 7) and moved its acceptance with the recommendation concerning the time and place for the 1950 annual meeting. The motion was seconded, and it was so voted.

Committee on Public Health — Dr. Roy J. Ward, Worcester, *Chairman.*

Dr. Ward presented the report (Appendix No. 8) as printed with two additions: telephone approval from his committee of the survey of multiple sclerosis by the Harvard School of Public Health and of the chest x-ray program in Boston. Dr. Ward made a motion that the Council also approve these two projects. The motion was seconded, and it was so voted. Dr. Ward then made a motion that certain very simple "standing orders" for nursing homes issued by the Department of Health approved by his committee be approved by the Council. The motion was seconded, and it was so voted.

Dr. Ward made a motion that the arthritic survey be approved and that it be accomplished with and through the office of the Commissioner of Health. The motion was seconded and so voted.

Dr. Ward made a motion that a sub-committee of his committee be appointed to study the problem of arthritis. The motion was seconded, and it was so voted.

He then moved for approval of the report as a whole. The motion was seconded, and it was so voted.

Committee on Membership — Dr. Lewis S. Pilcher, Middlesex South, *Chairman.*

Dr. Pilcher presented his report as printed (Appendix No. 9) and spoke as follows:

> The reason for discussing this report in some detail and giving special consideration to it is that the principal recommendation of the Committee on Membership concerns a problem that has been discussed before by the Council on several occasions, under differing conditions, and has been turned down. So we feel very strongly that this recommendation should be approved.
>
> The recommendation concerns changing the by-laws as relates to application for membership of graduates of unapproved and foreign medical schools. Now, when

this by-law was originally written, there was an influx of refugee physicians to the United States, particularly to Massachusetts. There were several unapproved medical schools within Massachusetts that were turning out large numbers of graduates each year, and it was felt that the Society had to protect itself by passing this by-law, which refused these graduates the right to apply for membership until they had been licensed for five years.

I want to call attention to the fact, however, that this by-law did not say that they had to be licensed in Massachusetts, or that they had to be residents of Massachusetts. They could come to Massachusetts after having been licensed anywhere in the United States, and as far as the by-laws are concerned, they could be in Massachusetts just one day before applying for membership in the Massachusetts Medical Society. The members of our Committee felt that that by-law, as far as the five-year provision was concerned, was no longer necessary, for the chief reason that refugee physicians are no longer a problem in this state, and secondly, that as of this year, all the unapproved medical schools in the country have been closed.

The objections to changing the by-laws are that if we do not have such a long waiting period, the physicians in the community will not have as long an opportunity to become acquainted with these applicants, and, of course, it is upon the other physicians in the community that we consider admitting these applicants to the Society.

However, under the old by-laws they did not have to be residents of the community. There was no residence requirement, and I should like to point out that under the by-laws of the Society it is the job of the Committee on Membership to satisfy itself that an applicant to membership is suited for membership, and any applicant who applies for membership in the Society who comes from an unapproved school, or who has any questionable background, is very thoroughly investigated by the Committee. We do not accept the letters that come with the application, which, everybody recognizes, may be written under pressure or may be just a formality. We call up in the community. We call up the members of the district committee and ask them to come in and discuss these men, and if there is still any question in our minds, we postpone the application for six months for further investigation. Thus, there are adequate safeguards within the Committee on Membership to assure that anybody who applies for membership in the Society will not be admitted if he should not be. And it does not require protection in the by-laws.

I should therefore like to move approval of the recommendation of the Committee on Membership to change the by-laws, Chapter V, Section 2 (b), second paragraph, to read as follows:"The applicant has possessed a license to practice medicine in the Commonwealth and has conducted that practice in the district in which he makes application for at least one year."

The motion was seconded.

Dr. Frank R. Ober, Suffolk, spoke against the motion. Dr. Philip G. Berman, Middlesex North, made a motion to amend, substituting two years for one year. The motion was seconded and defeated on a voice vote.

Dr. Charles C. Lund, Suffolk, Dr. H. Quimby Gallupe, Middlesex South, Dr. Carl Bearse, Norfolk, and Dr. Peirce H. Leavitt, Plymouth, spoke in favor of the main motion.

The President put the motion, and it was carried. Dr. Pilcher moved that the report as a whole be approved. The motion was seconded, and it was so voted.

Committee on Society Headquarters — Dr. Frank Ober, Suffolk, *Chairman.*

Dr. Ober presented his report as printed (Appendix No. 10) and spoke as follows:

We all recognize that in the last eight or nine years since Dr. Phippen was president, the things that he instituted have outgrown the Society's headquarters. And the question is whether we should go into the matter of headquarters, doing something to revamp this building, or whether we should combine with some other institution or go out and select a piece of land of our own. We have had an opportunity to combine with the Museum of Natural History on the site of land down near the Charles River Dam. There are only 6 acres there.

The School of Public Health at Harvard University is going to move away from its present headquarters, if they can build a building. They are anxious to have the Department of Health in the same location, because their functions are more or less interwoven, and many men do teaching from the Department of Public Health and many in the School of Public Health give advice to the Department.

Then, too, we must consider the Library and the *Journal*, and the Society, which would be under the same roof, or under closely neighboring roofs.

There are great advantages in being connected with the Department of Public Health and the School of Public Health at Harvard, if we could have a site of land, which I am quite sure we could obtain for a small sum, not far away, where there is sufficient parking space (about 14 acres). It would hinge on selling this.

Now, if we add to the present building by constructing a piece across the corridor in the area at the back, we have something that will last temporarily, but we should decide whether we shall be satisfied with something temporary, or do we want something that will last indefinitely? As we discussed this matter, one of the members of the Committee suggested that instead of having the doctors study this situation, it would be much better if we could get a man who was competent in the field to study all the plans, and make recommendations to the committee, which we can present to the Council.

Dr. Ober moved that the study be made. The motion was seconded, and it was so voted. Dr. Ober then moved that a sum not exceeding $5000 be appropriated to cover the cost of such a study. The motion was seconded, and it was so voted. Dr. Ober then made a motion to approve the report as a whole. The motion was seconded, and it was so voted without discussion.

Committee on Industrial Health — Dr. Henry C. Marble, Suffolk, *Chairman.*

The Secretary presented the report as printed (Appendix No. 11) for the chairman. He noted that the date for the Industrial Health Conference had been changed to December 14, 1949. The Secretary moved the approval of the report as a whole with its recommendation. The motion was seconded and it was so voted.

Special Committees

Committee to Meet with the Massachusetts Hospital Association — Dr. Albert E. Parkhurst, Essex South, *Chairman.*

Dr. Harvey Morrison presented the report (Appendix No. 12) as informational and moved its acceptance. The motion was seconded, and it was so voted.

Dr. Albert Hornor made a motion that the Council extend its thanks to the Committee and request it to report further progress at the next meeting of

the Council. The motion was seconded. Dr. McKittrick made the following remarks:

I hope this isn't entirely out of order, but I should like to put my nickel's worth in. Now, this committee cannot do this job. I am not a member of the committee, but I have put a lot of time and effort on this problem and any committee appointed isn't going to be able to do this job. This job is going to be done at a local level, and that local level represents the individual hospitals. We have been going through this at the Massachusetts General Hospital. We have been bogged down not by the problem that is under discussion but by certain other matters that complicate it. And we have eventually agreed almost in total with this report. It has been done in certain other hospitals in the State and it has been done in hospitals outside this state.

I should like to suggest that the Committee not be burdened with too much responsibility but that every one start working at the local level, and get the ball rolling for conferences between administration and between staffs.

The so-called McKittrick report can be taken as the basis from which discussion starts and if individual hospitals will do that, continuous pressure will not be put on this committee, which can only go so far and no farther.

The Secretary made the following statement:

I want to second what Dr. McKittrick has said, and to refer you all to the proceedings of the House of Delegates of the Annual Meeting of the American Medical Association held in Atlantic City last June, because there you will find the Hess Committee report, which every one of you should read, because it probably will mean the solution of your troubles, if you have any with your local hospital. And that committee report includes in it the McKittrick report, the Report on Special Services, which, I wish to tell you, is a monument to the efforts of that committee and the Society in this whole problem.

The President put the main motion, and it was so voted.

Committee on Postgraduate Medical Education — Dr. W. Richard Ohler, Norfolk, *Chairman.*

The Secretary presented the report as printed (Appendix No. 13) for Dr. Ohler as informational and moved its acceptance. The motion was seconded, and it was so voted.

Committee on Medical Economics — Dr. Elmer S. Bagnall, Essex North, *Chairman.*

Dr. Bagnall submitted the report as printed (Appendix No. 14) and moved the approval of the new wording of Principle No. 13. The motion was seconded.

Dr. Hornor opposed the motion for reasons that he mentioned as follows:

I don't think it is going to do us any good to put such a thing in. It is none of our business whether the schools go out for assistance or not.

Before the Congress at present is a bill embodying this idea, in which it has been insisted that funds must be furnished for schools for the education of osteopaths.

I believe that schools that are now unworthy, which just hold charters and are not really operating, can use this to go to the federal Government and get money and we shall see an increase in unworthy schools.

Dr. Vlado A. Getting, Middlesex South, spoke as follows:

Being the administrator of a department that is now receiving between $2,000,000 and $3,000,000 in federal funds today, I should perhaps tell you the experience we have had regarding any attempted control from the federal Government over a state program. There isn't any. If the Great White Father in Washington puts out regulations and rules that seem to be stringent, all we have to do is make a complaint, and the rules are changed immediately.

I will say frankly that throughout the country, as a whole, the quality of public-health practice is greatly increased as a result of federal grants-in-aid for research and that every dean that the American Academy of Pediatrics representatives have communicated with has indicated not only that he is willing to accept the money but also that his experience has been good.

As a member of the Approving Authority for Medical Schools, it was our responsibility, and Dr. Gallupe can well vouch for this, to look into the finances of training medical students. The costs have gone up tremendously. The income of the schools has not kept pace with the expenses.

I believe that it is in the interests of the training of physicians to make it possible for them to receive money from the Government, if the Government wants to give it to them.

In the Committee on Medical Economics and in the Committee on National Legislation, of which committees I happen to be a member, it was decided that we in our letters to Congress would indicate that the Society is not in favor of any legislation that would support schools of osteopathy, so that complaint would be taken care of. I think on the whole that this point No. 13 as now written will be of benefit to all three medical schools in Massachusetts. I think that if even the president of Princeton, who said he would not accept federal funds, carefully analyzed his budget, he would find that a great deal of funds now used for research in Princeton are from a federal source.

Dr. Charles G. Hayden made the following statement:

As a matter of information, I should like to point out that the bill now before Congress, which would provide for the subsidization of medical schools, was drawn in cooperation with the American Medical Association. For that reason, I feel that it rightly comes within the province of this group to take action one way or another on this matter.

Secondly, along the line of Dr. Getting's remarks, as chairman of the Subcommittee on National Legislation, I have already sent a protest regarding the provision for subsidies for schools of osteopathy.

The President put the question, and Dr. Bagnall's motion was passed. Dr. Bagnall then made a motion to approve the report as a whole. The motion was seconded, and it was so voted.

Committee on New England Postgraduate Assembly — Dr. Richard P. Stetson, Suffolk, *Chairman.*

The Secretary presented the informational report as printed (Appendix No. 15) for the chairman and moved its acceptance. The motion was seconded, and it was so voted.

Committee on Diabetes — Dr. Howard F. Root, Suffolk, *Chairman.*

Dr. James H. Townsend, Middlesex South, presented the report as informational (Appendix No. 16) and moved its acceptance. The motion was seconded, and it was so voted.

The Co-ordinating Committee — Dr. Frank H. Lahey, Suffolk, *Chairman.*

The Secretary presented the informational report (Appendix No. 17) and moved its acceptance. The motion was seconded, and it was so voted.

Committee on Publicity Code — Dr. Donald Munro, Suffolk, *Chairman.*

Dr. Munro presented the report as printed (Appendix No. 18) and moved acceptance of the code as written in the report. The motion was seconded.

Dr. Barton and Dr. Norman A. Welch, Norfolk, objected to Section 6 of the code because the words "head of a major department or research organization" might refer to the head of a commercial organization who might not be a physician. Dr. Barton moved to amend the report by further study of Section 6. The motion was seconded.

Dr. Munro said the code applied only to fellows of the Society and stated that Section 2 was the governing paragraph as to who would come under the code.

Dr. McKittrick suggested that a comma placed after "hospitals" in line 1 of paragraph 6 would be helpful. On a show of hands Dr. Barton's amendment was defeated. On a voice vote, Dr. Munro's motion passed.

Dr. Munro then moved the adoption of the second recommendation to continue the committee. The motion was seconded, and it was so voted.

Dr. Munro moved the adoption of the third recommendation to publish the code in the new pamphlet on by-laws. The motion was seconded, and it was so voted. Dr. Munro made a motion to accept the report as a whole. The motion was seconded, and it was so voted.

Report of Meeting of House of Delegates of the American Medical Association

Dr. Leland S. McKittrick, Suffolk, presented the report as printed (Appendix No. 19) and moved its acceptance. The motion was seconded, and it was so voted.

Dr. John Fallon, Worcester, spoke as follows:

> At the last meeting of the House of Delegates, they asked that district and state societies institute committees to deal with hospital relations. Our committee under the name of the Committee to Meet with the Massachusetts Hospital Association has been doing that for a long time, and simply to get the thing in line with the American Medical Association terminology, I move that the name of this committee — and the Executive Committee approved the change — be changed to the Committee on Hospital and Professional Relations.

The motion was seconded, and it was so voted.

Advisory Committee on Red Cross Blood Bank — Dr. Lamar Soutter, Suffolk, *Chairman.*

Dr. Carl Bearse, Norfolk, said that since neither the chairman nor any other member of the committee was present, he moved that the report be deferred. The motion was seconded.

Drs. McKittrick, Gallupe, Lund and Parkin spoke against this motion because of the importance of the report. Dr. Getting spoke as follows:

> The Department of Public Health appropriates about $150,000 as joint sponsor of this program. The Red Cross is spending in round figures about half a million dollars for the blood program, for the collection of the blood and for processing. In addition to that, they have in Massachusetts a pilot plant in our laboratory, where new procedures and technics are developed after they are first tested in Dr. McCoombs's laboratory at Harvard Medical School.
>
> I believe that the purpose of this report is to improve the public relations between the hospitals, the profession at large and the American Red Cross and it is particularly important right now for the simple reason that this fall the American Red Cross will be opening a permanent blood center here in Boston, and while I can well understand the reluctance of the Council to act upon this matter, in the absence of a member of the committee, I believe that it is an oversight and I believe that the merits of the report speak for themselves.

The Secretary moved the adoption of the whole report as printed (Appendix No. 20). The motion was seconded, and it was so voted.

Subcommittee of the Executive Committee on Blue Cross–Blue Shield Problems — Dr. Charles J. E. Kickham, Norfolk, *Chairman.*

Dr. Kickham presented the report as amended by the Executive Committee (Appendix No. 21). Concerning the only recommendation of the committee, Dr. Kickham spoke as follows:

> As we know, some physicians on an office basis have become members of Blue Shield, but up to the present time we understand that the association of groups of doctors or groups of physicians getting on the hospital basis, as in the Blue Cross, has not been carried out, and it was the opinion of the Committee that this discussion should be referred to an appropriate committee and brought back at a coming meeting of the Council. The Executive Committee voted that this present committee be empowered to investigate this subject more fully and to report to the Council. I, therefore, move the acceptance of the report in addition to the recommendation of the Executive Committee.

Dr. Charles Hayden made the following remarks:

> Again as a matter of information I should like to call attention to the fact that we receive upwards of half a dozen requests each week from physicians who want to join Blue Shield. Prior to September 1 of this year, we had no nongroup program and because physicians by and large are not associated with eligible groups, we were able to turn down those requests, giving them the information that the matter had been discussed by the Committee on Public Relation previously and that it was the policy of the Society not to make any arrangements for Blue Shield enrollments as have been made for Blue Cross enrollment. Now, under our present nongroup contract, I see no legal way in which we can turn down any physician who applies, provided he meets the qualifications that have been established for nongroup enrollment.

Dr. James C. McCann, Worcester, then spoke as follows:

> In New York State the prepayment group had given little consideration to disruption of teaching services, since they are formally organized with the arrangement of limited staff members to teach the students associated

with the schools and colleges coming to those hospitals. We knew from the New York groups that private patients and beds in the teaching corridors could be interspersed with the teaching beds and that the effort of the teaching group was seriously disrupted.

The Blue Shield group called a meeting requesting the men in the teaching hospitals to advise us how we might maintain the objectives of prepayment and still not disrupt the teaching efforts in the schools and teaching hospitals. The suggestion was that we adopt the policy that we have previously used in payment of men associated with private groups — that is, checks were sent to a designated member of the group and the disposition of funds was then determined by the practitioners in that group.

There are several private groups in the State and the policy of those groups is to assure that all their members are participating physicians, so that then one saves the immense inconvenience of determining who in a group operates on a private patient — the Blue Shield compensates that group as such for all work done under the auspices of that group.

The suggestion of the teaching group was that we simply send out patients to them as formally organized groups, with the assurance that they would so organize. I think that the question of what is the ultimate fate of those funds, once the monies are placed in the hands of those physicians, probably is their concern. Just what the ultimate decision of these several groups will be — whether they distribute the money among themselves or whether they will of their own volition use it for research purposes — they will determine, and offhand I do not feel that Blue Shield should further supervise the fate of those funds other than seeing that they are placed in the hands of the men who are responsible for the care of the patient.

Dr. Allen put the question, and it was so voted.

Advisory Committee to the Woman's Auxiliary — Dr. John F. Conlin, Suffolk, *Chairman.*

The Secretary presented the report as printed (Appendix No. 22) and moved its acceptance. The motion was seconded, and it was so voted.

New Business

Dr. Lund, speaking for a committee appointed by the councilors of Suffolk District Medical Society, presented the following resolution:

Whereas a statement dealing with the treatment of diabetes quoting Dr. Michael Samokian, a biochemist, and released by the American Chemical Society has been printed prominently in the public press, and

Whereas this statement referring to the chronic insulin poisoning and stating that virtually all adult victims of diabetes can be restored to normal health and life comfortably, without insulin injections, leads to the interruption of established treatment, and consequently endangers the health and life of diabetics,

Be it resolved that the Council of the Massachusetts Medical Society recommends that any information pertaining to the diagnosis and treatment of disease be released to the public only with the approval of a responsible committee or authorized officer of the organization from which the release emanates, and

Be it further resolved that the delegates of the Massachusetts Medical Society to the American Medical Association be instructed to present this resolution to the House of Delegates of the American Medical Association and the request that the trustees recommend that this action be taken by all scientific organizations, and in addition, to offer the advisory services of the American Medical Association and its constituent societies to all such organizations.

Dr. Lund made a motion to suspend the council rules for the resolution to be discussed. The motion was seconded, and it was so voted unanimously.

Dr. Munro said he approved of the resolution but believed it should be rewritten to comply with the code adopted at this meeting. He made the following motion: "to amend this resolution by adding a further paragraph to it, to the effect that this resolution be referred for final form and structure to a committee of this society, which shall be designated by the President before publication in public print and other mediums." The motion was seconded.

Dr. Fallon said he believed the resolution should be clarified before presentation to the House of Delegates. He made the motion to table. The motion was seconded and it was so voted.

A motion to adjourn was made and seconded, and it was so voted at 1:05 p.m.

H. Quimby Gallupe, M.D., *Secretary*

APPENDIX NO. 1

Attendance of Councilors

Barnstable
D. E. Higgins

Berkshire
J. H. Fierman
C. T. Leslie
Helen M. Scoville
P. J. Sullivan

Bristol North
J. H. Brewster
C. N. Burden
M. E. Johnson
J. L. Murphy
W. M. Stobbs

Bristol South
R. B. Butler
D. F. Gallery
R. H. Goodwin
M. T. MacDonald
A. J. Pothier
C. C. Tripp

Essex North
E. S. Bagnall
W. J. Bain
J. T. Batal
Z. W. Colson
J. F. Curtin
A. P. George
H. R. Kurth
P. J. Look
R. C. Norris
F. W. Snow
F. N. Sweetsir
C. F. Warren
C. A. Weiss

Essex South
Bernard Appel
W. W. Babson
L. F. Box
Gerard Cote
T. J. Foote
S. N. Gardner
M. H. Pett
E. D. Reynolds
H. D. Stebbins
C. F. Twomey
R. J. Williams

Franklin
L. R. Dame

Hampden
M. S. Allan
E. P. Bagg
R. L. Barrett
Adolph Franz, Jr.
J. M. Gilchrist
A. M. Glickman
Frederic Hagler
D. R. Hayes
S. F. Potsubay
L. A. Putnam
A. G. Rice
G. L. Schadt
J. A. Seaman
H. N. Simpson

Hampshire
E. J. Manwell
J. G. Pekala

Middlesex East
J. L. Anderson
T. P. Devlin
Robert Dutton
E. M. Halligan
K. L. Maclachlan
I. W. Richardson
R. R. Stratton
J. M. Wilcox

Middlesex North
P. G. Berman
W. M. Collins
S. A. Dibbins
L. J. Hall
L. F. King
A. J. Stewart
J. D. Sweeney
H. A. Titus

Middlesex South
E. W. Barron
Harris Bass
J. M. Baty
L. A. Blacklow
H. K. Bloom
G. F. H. Bowers
Madelaine R. Brown
R. N. Brown
J. F. Casey
C. W. Clark
E. A. Cooney
W. H. Crosby
H. J. Crumb

J. A. Daley
C. L. Derick
J. G. Downing
A. G. Englebach
W. C. Feeley
C. W. Finnerty
J. M. Flynn
H. Q. Gallupe
V. A. Getting
H. W. Godfrey
A. D. Guthrie
C. G. Hayden
Eliot Hubbard, Jr.
F. R. Jouett
L. G. Kendall
H. A. Kontoff
A. A. Levi
A. N. Makechnie
R. A. McCarty
Dudley Merrill
C. E. Mongan
Dwight O'Hara
Fabyan Packard
L. S. Pilcher
Max Ritvo
L. G. Rondeau
M. J. Schlesinger
E. W. Small
H. P. Stevens
A. B. Toppan
J. H. Townsend
J. E. Vance
C. F. Walcott
R. H. Wells
B. M. Wein

NORFOLK

C. E. Allard
B. E. Barton
Carl Bearse
Elizabeth Broyles
J. H. Cauley
G. L. Doherty
Albert Ehrenfried
P. S. Foisie
Susannah Friedman
D. L. Halbersleben
J. A. Halsted
R. J. Heffernan
L. F. Johnson
C. J. Kickham
C. J. E. Kickham
D. L. Lionberger
D. S. Luce
C. M. Lydon
T. F. P. Lyons
F. P. McCarthy
H. L. McCarthy
R. T. Monroe
H. R. Morrison
Hyman Morrison
D. J. Mullane
H. A. Novack
J. J. O'Connell
E. E. O'Neil
R. S. Palmer
G. W. Papen
S. H. Proger
H. A. Rice
D. D. Scannell
J. A. Seth
L. A. Sieracki
S. L. Skvirsky
E. S. Smith
Kathleyne S. Snow
J. W. Spellman
A. R. Stagg
W. J. Walton
N. A. Welch
W. A. White, Jr.
G. F. Wilkins
P. R. Withington
Marjorie Woodman

NORFOLK SOUTH

D. J. Bailey
Harry Braverman
R. L. Cook
F. W. Crawford
Frederick Hinchcliffe
E. K. Jenkins
N. R. Pillsbury
D. B. Reardon

PLYMOUTH

J. C. Angley
H. H. Hamilton
P. H. Leavitt
D. A. Martin
C. D. McCann
Mildred L. Ryan

SUFFOLK

H. L. Albright
M. D. Altschule
C. H. Bradford
W. J. Brickley
W. E. Browne
A. M. Butler
A. J. A. Campbell
E. M. Chapman
M. Henry Clifford
A. P. DerHagopian
Maurice Fremont-Smith
Joseph Garland
G. L. Gately
R. L. Goodale
A. A. Hornor
H. A. Kelly
H. E. Kennard
T. H. Lanman
R. I. Lee
C. C. Lund
C. F. Maraldi
L. S. McKittrick
Donald Munro
H. L. Musgrave
F. R. Ober
J. P. O'Hare
L. E. Parkins
Helen S. Pittman
J. J. Regan
W. H. Robey
C. G. Shedd
R. M. Smith
C. M. Stearns
Conrad Wesselhoeft

WORCESTER

A. W. Atwood
George Ballantyne
Jacob Brem
J. B. Butts
F. B. Carr
G. R. Dunlop
John Fallon
Thomas Hunter
H. L. Kirkendall
D. G. Ljungberg
J. A. Lundy
J. C. McCann
D. K. McClusky
J. M. Olson
F. A. O'Toole
E. L. Richmond
N. S. Scarcello
R. J. Ward
B. C. Wheeler
J. J. Tegelberg

WORCESTER NORTH

J. J. Curley
K. J. Jolma
G. P. Keaveny
J. P. Marnane
J. V. McHugh
J. G. Simmons

APPENDIX NO. 2

REPORT OF THE EXECUTIVE COMMITTEE

After lunch at the Hotel Kenmore on September 7, 1949, the meeting of the Committee was called to order at 1:00 p.m. by Dr. Arthur W. Allen with all the officers of the Society, Dr. John F. Conlin, Dr. Joseph Garland and sixteen of the eighteen councilors present.

Under new business before the committee, the Secretary presented the following:

Under the existing by-laws (Chapter III, Section 5) the ratio of councilors is 1 for every 20 fellows, and in the same section the by-laws demand the election in each district of at least 6 councilors to designated offices.

As a result, four of the district societies are not permitted to have the required number of councilors, and, therefore, some fellows have to fill two positions.

The Secretary pointed out that the present council is too large (365) for the present seating and luncheon facilities, that one first-class mail to councilors cost over $100 and that in districts such as Middlesex South it is often difficult to find 59 fellows as councilors.

The Secretary suggested that the present difficulties might be solved by a change in the ratio to 1 councilor to 40 fellows and that no district shall have fewer than 6 councilors. If this were done, twelve districts would each have the necessary 6 councilors, two districts between 6 and 10, two districts between 10 and 20, and the remaining two between 30 and 40. Instead of 365, the council would number nearer 270.

Dr. John Fallon, Worcester, stated that when the present by-laws were written this matter had been considered, but he thought that the matter should be placed in the hands of a committee to study redistricting. He agreed that the present council is too large, but believed that it increased the interest of a larger number of fellows in the affairs of the Society.

The Secretary said that the matter of redistricting was the second to be considered under new business, since it was apparent that a district such as Middlesex South was spread over too large an area and that fellows in Charlestown and Somerville found it difficult to be interested in Framingham's problems.

Dr. Dame, Franklin, stated that he thought the matter of a minimum number of councilors was the most pressing at this time and moved that the Executive Committee recommend to the Committee on By-laws and Council Rules that there shall be no fewer than 6 councilors per district. The motion was seconded, and it was so voted.

Dr. Fallon suggested that a committee be appointed to study redistricting and the ratio of councilors. Dr. Hornor, Suffolk, suggested that the committee might be a small one appointed by the President, a representative from each district or a representative from the hospitals over the State as members, along the lines suggested by Dr. Fitz several years ago.

Dr. Hurlburt, Plymouth, said he thought that redistricting was mostly a metropolitan problem. Dr. Merriam, Middlesex South, suggested that the new Advisory Board might study the problem. Dr. Curley, Worcester North, said he thought the committee might best consist of 3 fellows from the Boston area and 4 others spread over the State.

Dr. Fallon moved that it be recommended to the Council that the President appoint a committee of 18 representing each district to study the problem of redistricting and councilor representation, and further, that an executive committee of not more than 7 of the committee have power to act. The motion was seconded, and it was so voted.*

The Secretary then gave the status of the American Medical Association assessment collection as follows:

At the end of July only 49 per cent of our membership had paid. A letter was written to those who had not paid and now the percentage is near 66. The Secretary has now turned over further collection to the districts, hoping that by close contact the percentage paying might rise to 80 or 85.

The Secretary said that the Boston Chamber of Commerce wishes the Society to invite the American Medical Association to hold the interim clinical session in Boston

*The motion recommending the appointment of an executive committee "with power to act" in the matter of redistricting was amended by the Council to read "for this purpose."

after 1950 and assures the Society that exhibit and hotel space is available in sufficient quantity.

Dr. Kickham, Norfolk, moved that the Committee recommend that the Society invite the American Medical Association to hold the interim session in Boston at a future date. The motion was seconded, and it was so voted.

The Secretary stated that the next item for consideration was the selection of the Massachusetts Medical Society candidate for the American Medical Association's General Practitioner's Award as directed by the Council. He said he knew of three candidates: from Essex North, Dr. Elmer S. Bagnall; from Norfolk, Dr. Dean S. Luce; and from Worcester, Dr. William E. Balmer. These fellows had been officially chosen by their respective district societies.

At the request of the President, Dr. Arnold P. George, Haverhill, presented the name of Dr. Elmer S. Bagnall as the candidate from the Essex North District Medical Society and submitted a volume of material concerning Dr. Bagnall. By a vote of the committee, the material was passed around for inspection.

Dr. Charles J. E. Kickham, Norfolk, presented the name of Dr. Dean S. Luce as the candidate of his district and submitted material concerning Dr. Luce, which was passed around.

Dr. John Fallon, Worcester, presented the name of Dr. William E. Balmer as the candidate of his district and submitted material concerning Dr. Balmer.

Dr. Allen asked Dr. Conlin to say something about the public-relations aspect of the award. Dr. Conlin spoke as follows:

> I was just trying to go back to the original purpose in making this award. The requirements were never too clearly stipulated. It was to be a person who had been engaged in general practice exclusively, who was honored and respected within his community, and who had contributed to the well-being and respect for medicine in his community. At such time as a practitioner is selected for the award, by the vote of this Executive Committee, it becomes a function of the public-relations branch of the Society to make something of it. That is the purpose of the award on a national basis, and I think it should guide the choice of this committee. That is, what can benefit medicine in Massachusetts from the choice of such a person?
>
> Obviously, it is a public-relations gesture, purely and simply. That is why it was designed, to get the people of American thinking about the function of the kindly, old family doctor, who had borne the burden through the years and was the backbone of the medical profession, and all those other things that we have heard so much about. It means that the selection emerging from this group should be one that has some chance of emerging nationally.

The President then called for a vote by ballot and named Drs. Welch and Garland as tellers. While the tellers collected the ballots and retired to count them, Dr. Allen spoke as follows:

> Whichever candidate should be selected by the Executive Committee, I think that we should support that candidate to the very best of our ability. Now, there are three excellent men whose names have been submitted, and any one of them would do credit to the State. Now, of course, two of these men will have to be defeated, unfortunately, but whichever man does get the most votes, or is selected, I hope that we will spread throughout the State in every district the word that this has been done as legally as we know how, that this candidate has been selected and that we hope there will be a complete accord in the State and that everybody will support this candidate to the best of his ability, because it would be quite an honor to bring this award to Massachusetts, if it can possibly be done.

Dr. Garland then announced that Dr. Elmer S. Bagnall had been selected. Dr. Kickham moved that the vote be made unanimous. This motion was seconded, and it was so voted.

At this point, Dr. John Curley asked for support of the World Health Organization.

Committee Reports

Committee on Public Relations

Dr. Allen presented the recommendation that a medical-press-radio conference recommended by Dr. Conlin be held during the latter part of October, 1949. A motion was made to approve this recommendation. The motion was seconded, and it was so voted without discussion.

Dr. Allen presented the second recommendation that the Health Exhibit proposed for the fall of 1949 be indefinitely postponed because plans could not be completed in time. It was moved and seconded that the Council approve this recommendation. The motion was seconded, and it was so voted without discussion.

Dr. Allen then presented the third recommendation concerning lay awards. The Secretary moved that the Committee recommend that the Society make awards to laymen as described in the report. The motion was seconded. The Secretary reported that after communicating with all the other states on this matter, he found that a few had made lay awards and they all thought it a fine idea. Dr. Dame said be believed the Society should produce a citation of merit, which would be given to one who deserved it, rather than just pick out a person to honor. Dr. Conlin spoke at length on the public-relations value of the award.

The original motion was withdrawn, and the President asked Dr. Dame to draw up a substitute motion embodying the points brought out in discussion — namely, the citation, the number of awards, the choice by the public-relations group, the need for careful publicity and the value of naming the citation.

While Dr. Dame and Dr. Conlin were conferring on the wording of a motion, the President voted that the remainder of the report was informational. The Secretary moved the acceptance of the report as a whole, and it was so voted.

Dr. Dame then made the following motion: "That the Council establish a Massachusetts Medical Society citation to be awarded to a layman or a group of laymen for outstanding contributions to medical progress. Not more than three awards shall be made in any one year. The recipients shall be selected by a committee to be designated by the President."

Dr. Fallon suggested that the citation should bear a name, and Dr. Garland said that probably Lemuel Shattuck had made the grestest contribution to Massachusetts. Dr. McKittrick said he thought the committee and the Council should be briefed on Lemuel Shattuck. (The discussion ended here without a second to Dr. Dame's motion; however, the Committee was not antagonistic and were in favor of naming the citation.)

Information obtained by the Secretary revealed that under a resolve of the Legislature on May 2, 1849, Mr. Shattuck was named the chairman of a commission to produce a sanitary survey of the State. The report was published in 1850. Its proposal was the creation of state and local boards of health then nonexistent. The report was perhaps the most significant single document in the history of public health.

Standing Committees

Committee on Tax-Supported Medical Care

This report was submitted by the President as informational. It was moved, seconded and voted to approve the report.

Committee on Legislation

The report was approved as informational.

Committee on National Legislation

This report was approved as informational. At the request of the President, Dr. Hayden said that the letters were printed because of their interest and for the information of the Councilors, that Senator Lodge could not be convinced to vote our way and that Senator Smith of Maine could not be won over. Dr. Allen commented on the excellent job done by the committee during the hot summer. Dr. Hornor called attention to the fact that the year "1938" should be changed to" 1948." The amended report was then approved by vote of the committee.

Committee on Arrangements

The Secretary moved that dates and place suggested for the 1950 annual meeting be approved. The motion was seconded and so voted.

Committee on Membership

Dr. Pilcher presented the report of the Committee and stated that the recommendation was approved by four of his committee, and that one absentee wished to be recorded as not favoring it. The Secretary moved that the recommendation of the committee be approved. This motion was seconded. The Secretary then reviewed the problem and stated the reasons for the recommendation as printed in the Circular of Advance Information. Dr. Fallon said the Committee on Membership would still have as much power as ever. Dr. Hornor said the present by-law was written as it is at the request of the Committee on Membership at the time.

Dr. Parkhurst questioned the value of only a year and wondered if fellows would sponsor a man after such a short acquaintance. Dr. Allen said that by next year most graduates of unapproved schools would have been registered five years. Dr. Cook said he thought this a step forward. Dr. Allen put the question, and it was so voted.

The Secretary then moved that the report of the Committee on Membership concerning retirements and resignations and deprivations be approved. The motion was seconded. Dr. Hubbard said the name of Dr. Charlotte A. Stewart should be removed from the list of deprivations because she had paid her dues. With this amendment, the motion was passed.

Committee on Public Health

The report was presented by Dr. Ward and was approved, including the recommendation concerning the survey, without discussion, as was the matter of the subcommittee.

Committee on Society Headquarters

In the absence of the chairman, Dr. Joseph S. Barr presented the report of the committee and said that with the permission of the President, he would like to present some thoughts of his own as follows:

> The problem of planning changes in the physical layout of the Massachusetts Medical Society Headquarters cannot be satisfactorily solved without defining rather carefully the scope of the Society's activities. This not only should embrace the present situation but also should include a careful look into the future. If we assume that the federal Government will, in the near future, be the dominant factor in American medicine, our plans should be modest and tempered by expediency. If, on the other hand, we foresee contination of our present voluntary system, we are faced with a challenging opportunity. The Massachusetts Medical Society is the logical, in fact the only organization, that can assume a position of active leadership in all phases of the never-ceasing struggle to improve the health of the people of the Commonwealth and of this geographic region.
>
> The postgraduate training program for general practitioners, not only of Massachusetts but also of New England, will need to be expanded far beyond our present efforts in that direction. Television will probably be the new courier to carry the best of modern medical progress directly to the staff of every community hospital, not just once a year but perhaps every month. The community hospitals, the community health center and the general practitioners are key figures, and we must give them every assistance in the fulfillment of their needs. Regional rather than state co-ordination of postgraduate medical programs is obviously of value.
>
> Our relation to Government agencies, federal and state, needs to be realistically reappraised. We must work with these agencies, for Government is now in medicine and will be in it increasingly in the foreseeable future. The Massachusetts Medical Society must actively study public-health problems and assist in solving them. Our relation with the public itself leaves much to be desired. The lay public needs education not only in personal hygiene and home nursing and in the understanding of disease processes, but also in the broader fields of public health and medical economics. The Society must assume leadership in the field of lay education and in the dissemination of medical news of interest to the public.
>
> The Headquarters Committee has wrestled for years with the problem of how to house the expanding activities of the Massachusetts Medical Society. There appear to be two possible alternative solutions to the problem. One is to enlarge and alter our present headquarters. The other is to build a *new* headquarters in a *new* location. Several surveys have been made and two sets of plans have been independently prepared that would improve what we now have. No adequate study of a new building program has been made. Such a study should be undertaken and completed before a sound basis for decision between these two plans can be reached.
>
> A new building program is an ambitious venture and will require a great deal of careful study. For such a venture to succeed, the co-operation of many existing organizations will be necessary. It is unrealistic to expect that a committee can without assistance prosecute and complete such a study. It is believed that the study can best be undertaken by selecting one person, who, under the direction of the Committee, would devote his full-time efforts to the project. At the end of a limited time, perhaps three months, he should be prepared to submit a preliminary report. If the report indicates beyond reasonable doubt that the project would receive support from other interested organizations and that it is possible to finance a new building program satisfactorily, he should then be authorized to proceed with the preparation of more detailed plans.
>
> Careful study may reveal that a new building program for the Massachusetts Medical Society is completely visionary and impractical. It may, on the other hand, reveal that this program is not only possible but also the only sound solution to our present pressing problems. There are many details and problems that will arise in connection with the proposed study. If someone with the essential initiative and ability is selected and is given proper authorization and assistance, he should be able to submit a concrete report with specific recommendations, something that has not been done previously.

Dr. Hornor then made the following statement:

> The question is whether the Massachusetts Medical Society should continue to grow steadily by confining its activities to meeting immediate problems to the best of its ability or should look forward to great expansion either alone or in combination. The Committee decided against combining with a nonmedical group, but did not feel capable of making the decision about combining with such organizations as Harvard School of Public Health and Massachusetts Department of Public Health without a more thorough investigation than we felt capable of performing. If the Executive Committee thinks it can answer the question, the Committee on Society Headquarters will be grateful and proceed accordingly; otherwise, we would like paid help who can devote many hours to the problem.

Dr. Hornor then made a motion that the recommendation of the committee be approved. The motion was seconded. Thirty-five pages of discussion followed, during which the following points were emphasized: the committee had not accomplished very much for ten years; the committee might do a great deal of the groundwork itself; all parties concerned in the future building plans should be invited to sit in with the committee; the plans of the Library trustees for the enlargement of 8 Fenway should be carefully considered; the plans of the future development of the Society in postgraduate-education programs should be decided; the possibility of interesting a foundation interested in an enlarged program should be considered; the man selected to draw plans should also evaluate the problem as a whole; the treasurer believed that any money expended for the purpose should come out of the general expenses and not the Building Fund.

The President then put the question, and the motion was defeated. Dr. Conlin pointed out the difficulties of operating in the cramped quarters at 8 Fenway. Dr. Allen said he thought it would be too bad to spend a large sum on 8 Fenway if there was hope that we might have a truly dignified Academy of Medicine. Dr. John Curley moved re-

consideration of the motion. This was seconded, and it was so voted.

It was then pointed out in discussion that the Committee was sure that it could not solve the problem without expert advice and help, someone to do the leg work. Dr. Dame asked if the plan to join the Boston Museum of Science had been turned down. Dr. Barr said it had not. Dr. Barr said a policy for the future could not be developed without consultation of a great many people. Dr. Conlin stated that he did not know of any medical society satisfied with present quarters — they were all outgrowing them. Dr. Barr said that any plans developed by an employed person or group would have to be acceptable to the Committee. The President put the original motion again, which was seconded, and it was so voted.

Committee on Industrial Health

In the absence of the chairman, Dr. Henry Marble, the Secretary moved that the recommendation to hold an industrial health conference in Boston on November 16, 1949, be approved. The motion was seconded, and, it was so voted without debate.

Special Committees

Committee to Meet with the Massachusetts Hospital Association

This report was approved as informational without discussion. Dr. Hornor moved that the Committee be thanked for its fine efforts and be asked to make another report at the February meeting of the Council. The motion was seconded, and it was so voted.

Committee on Postgraduate Medical Education

This report was approved as informational.

Committee on Medical Economics

The report was presented by Dr. Bagnall, who moved the approval of the report. The motion was seconded. Dr. Hornor said he would like to see No. 13 left out of the principles, because he felt the problem was one between a certain school needing help and wishing to get it from the Government. Dr. Bagnall said it was not a state or individual problem because medical schools were educating students for the whole country. Private sources of aid are drying up. Dr. Curley objected to federal control after federal aid. Dr. Bagnall answered that the paragraph stipulates no interference by the Government.

Dr. Allen put the question, and it was carried by a majority of two.

Committee on New England Postgraduate Assembly

This report was approved as informational.

Committee on Diabetes

Dr. Root presented the report and said that now there are 148 units in 40 states taking part in the program. It was hoped to have an exhibit at the Eastern States Exposition. He said industry is very much interested. The most important thing was to get the interest of the doctors and that it would cost some extra money to send them a letter. Dr. Hubbard said Dr. Root should apply to the Committee on Finance. On motion made and seconded, the report was approved without discussion.

Co-Ordinating Committee

This report was approved without discussion.

Committee on Publicity Code

In the absence of Dr. Munro, Dr. Hornor presented the report and moved that the code be approved. The motion was seconded. Dr. Conlin outlined the history of the code, how it originally came from the Eye and Ear Infirmary as a hospital code to guide their staff, how it had been reviewed by the Committee on Ethics and Discipline and found not affecting the code of ethics of the Society. It was then referred back to a special committee to write a code applying to all fellows of the Society, and although a little cumbersome, it is spelled out for a purpose. It can be clarified for newspapers and radio at the proposed conference with press and radio.

The President stated the motion, and it was so voted. Dr. Hornor moved approval of the second recommendation to continue the committee. The motion was seconded, and it was so voted.

Dr. Hornor moved approval of the third recommendation, to publish the code in the new booklet on by-laws. The motion was seconded, and it was so voted.

Report of the Meeting of House of Delegates of the American Medical Association

This report was accepted as informational. The Secretary stated that the report of the Committee on Hospitals and the Practice of Medicine (The Hess Committee) had included the report of the Committee on Special Services of the Society and had praised the Massachusetts Medical Society for its valuable contribution. He also said he hoped everyone would read this report in the proceedings of the House of Delegates. Dr. Conlin moved that these remarks be given to the Council in the report of the Executive Committee. The motion was seconded, and it was so voted.

Dr. Fallon moved that the name of the Committee to meet with the Massachusetts Hospital Association be changed to the Committee on Hospitals and Professional Relations. The motion was seconded, and it was so voted.

Advisory Committee for Red Cross Blood Bank

Dr. Lamar Soutter presented the report and said that the Red Cross had to meet the approval and continue under that approval in everything that is done. The program depends greatly on publicity and on the support of the professions for success. The recommendations of the committee fall into three groups: publicity in the *Journal*, telling the doctors how they can help and the training of hospital personnel. It was moved and seconded that the first recommendation be approved. It was so voted.

It was moved that the second recommendation be approved if changed to "that the help of the *Journal* should be enlisted with the following ends in view." The motion was seconded, and it was so voted with the approval of Dr. Soutter.

Dr. Allen ruled that the permission asked for to write to hospitals and district societies for information on how the program is working was not necessary since the committee had that power. Dr. Soutter moved that the Society give its support to the program of training technicians. This motion was seconded and so voted. Dr. Hornor requested that the word "district" be substituted for "county." Dr. Soutter agreed.

Committee on Blue Cross–Blue Shield Problems

Dr. Kickham presented the report and asked permission to change the wording of the report by substituting for lines 17 to 24 on page 32 of the Circular of Advance Information beginning with the word "the" in line 17 and ending with the word "fit" on line 24, the following:

> It was pointed out that until about a year ago Blue Shield made no payments for medical services rendered to ward service cases, because it was the confirmed policy of the hospitals involved that staff physicians should not bill for such services. During 1948 this policy on the part of several teaching hospitals was altered to the extent that staff groups, but not individual physicians, were permitted to receive payments for third parties, such as Blue Shield and commercial insurance companies, for medical services rendered to service-ward patients. Formal group arrangements were made at two hospitals, and informal group arrangements were made at several other hospitals, after which Blue Shield began making payment to these groups.

Such permission was granted by vote of the committee. Dr. Kickham said that his committee had considered the recommendation at the end of the report, and that the matter of physician enrollment had subsequently been discussed several times without results. He hoped the President would be allowed to refer the subject to an appropriate committee. Dr. Hornor stated that the Committee on Public Relations had previously voted against group enrollment of physicians in Blue Shield.

Dr. Tripp moved that the subject be studied further by this committee, which will report to the Council at a later date. The motion was seconded, and it was so voted.

Dr. Fallon asked for clarification of the meaning of the words "judicious application by the medical profession" on page 33, line 9. Dr. Conlin said that for the doctor to charge an extra fee for these patients might be warranted in some cases, but that to do so would demand good judgment if severe criticism were not to be brought against the doctor and Blue Shield. On a motion duly made and seconded, the report as amended was approved.

Advisory Committee to Woman's Auxiliary

Dr. Conlin presented the report as informational and it was approved by the committee as such.

Dr. Conlin said that the Harvard School of Public Health is to conduct a survey of multiple sclerosis in the State with funds supplied by the National Society for Multiple Sclerosis and that approval of this survey had been obtained by a telephone vote of the Committee on Public Health. It should have been included in the report of that committee. Dr. Conlin made a motion that a recommendation to approve the survey be added as an amendment to the report of the Committee on Public Health. The motion was seconded, and it was so voted.

Dr. Conlin made a motion that a recommendation endorsing the Boston Chest X-ray Program be appended to the Report of the Committee on Public Health. This motion was seconded, and it was so voted.

On motion duly made and seconded, the meeting adjourned at 6:50 p.m.

H. Quimby Gallupe, *Secretary*

APPENDIX NO. 3

Report of the Committee on Public Relations

The meeting of the Public Relations Committee of the Massachusetts Medical Society was held at the Harvard Club at 6:00 p.m. on July 27, 1949. President Arthur W. Allen was in the chair; there were present 15 out of the 18 representatives of the district societies. Dr. H. Quimby Gallupe, secretary of the Massachusetts Medical Society, and Dr. John F. Conlin, director of medical education and information, were also present.

Dr. John F. Conlin presented to the Committee the desirability of a medical-press-radio conference to be held in the latter part of October, 1949. To this meeting would be invited, in addition to the medical profession, representatives of various hospitals and members of the press and radio. He felt that by and large the press is favorable to organized medicine. There is, however, some doubt in the minds of the press about possible sources of authentic information regarding medical subjects and medical information, such as the value of new drugs and recent medical advances. It was his opinion that newspapermen are just as ethical as members of the medical profession, and that members of the press are anxious to disseminate accurate information provided sources for the obtaining of such accurate information are available to them. It was Dr. Conlin's contention that the first such conference should be held in Boston and later be decentralized to the various district societies in order that there might be such sources of authentic information as the local press might desire. It was unanimously voted by the members of the Committee that such a conference be held.

It was suggested by the Committee at its meeting on August 4, 1948, and later approved by the Council, that a health exhibit should be organized in the fall of 1949. Inasmuch as plans could not be completed for such a program, the Committee unanimously voted to postpone action indefinitely.

Dr. John F. Conlin called to the Committee's attention that some states were recognizing laymen for meritorious or distinguished service in the support of public health and good medicine. It was felt that such a program wherever initiated stimulated good public relations. Many laymen or groups of laymen have rendered invaluable service to the progress of medicine by their energetic efforts in its behalf. Therefore, the Committee unanimously endorsed the following resolutions:

That the Council empower the Committee on Public Relations to award some layman or group of laymen a citation for outstanding service to medical progress.

That the Committee shall make not more than three such citations annually.*

Dr. Conlin reviewed the work that has been completed with reference to the national education campaign against compulsory health insurance. He emphasized that although there seems to be no immediate danger that the Administration's compulsory health bill will be passed, it was apparent that complacency and inactivity on the part of the medical profession might be disastrous. Efforts to perfect the machinery of the present organization must continue during the coming months. Emphasis was placed upon the necessary work to be carried on by the district co-ordinating committees with reference to the "Tell it to Twenty" portion of the Massachusetts campaign. A strong speakers' bureau should be developed in each district in which not only does the medical profession take part, but also competent and willing lay speakers are encouraged to present organized medicine's point of view regarding the Administration's health bill.

Harold R. Kurth, M.D., *Secretary*

*The recommendation to name the lay award "The Lemuel Shattuck Award" was amended by the Council to read "The Massachusetts Medical Society Citation for Outstanding Contributions to Medical Progress."

APPENDIX NO. 4

Report of the Committee on Tax-Supported Medical Care

The committee on Tax-Supported Medical Care has not met. The chairman of the committee has tried to get help on the questions referred to the committee at the last meeting of the Council from the Commissioner of Public Welfare of the Commonwealth of Massachusetts. Mr. Patrick Tompkins, the commissioner, has postponed any meeting with the members of the committee until after the legislature has prorogued. The committee will continue to work on this problem.

William W. Babson, M.D.
Donald Hight, M.D.
Francis P. McCarthy, M.D.
Albert A. Hornor, M.D., *Chairman*

APPENDIX NO. 5

Report of the Committee on Legislation

A meeting of the Committee on Legislation was held at the Harvard Club on June 24, 1949. The meeting was called to order by President Arthur W. Allen, who nominated the following men as members of the Executive Committee: Dr. Alfred M. Glickman, Dr. William E. Browne, Dr. Solomon L. Skvirsky and Dr. John Butts.

Dr. Allen's nominations were approved by the Committee. Dr. Skvirsky stated that he would be unable to serve as secretary of the Committee. By vote of the Committee his resignation was accepted, and Dr. Daniel F. Gallery, of Bristol South, was elected.

After some discussion it was voted that the Executive Committee be granted power to act on legislative matters in any case of emergency.

The main business of the meeting was a discussion of the cash sickness bill No. 2591, the passage of which had been urged by the Governor in his inaugural address. Mr. Charles Dunn stated that the Society should prepare a brief explaining its stand on this bill. On the completion of the discussion, the Committee voted unanimously in opposition to the bill, and Mr. Dunn was authorized to state in the brief that the legislative councilors of the Massachusetts Medical Society regret that they cannot approve the bill in its present form.

At the suggestion of the chairman, Dr. David L. Belding, Dr. Charles G. Hayden and Dr. John F. Conlin were asked to assist Mr. Dunn in the writing of the brief. The meeting adjourned at 10:00 p.m.

David L. Belding, M.D., *Chairman*

The brief as presented to the Committee on Ways and Means of the Legislature meeting in Executive Session was as follows:

Statement of the Massachusetts Medical Society on House No. 2591, the Cash Sickness Compensation Bill,

for the Committee on Ways and Means of the Massachusetts General Court.

The Massachusetts Medical Society finds itself not in complete agreement with House No. 2591, the Cash Sickness Compensation Bill, as it now stands.

This bill has been carefully studied by the Society since printed copies became available. It is not our purpose to single out points we would praise or condemn as private citizens and voters interested in the broad problems of the public health.

Our principle function as a medical society is to view this, as all other legislation pertaining to health, as working for or against the best possible standards of medical progress and the mental and physical health of the public.

Under this bill as drawn the physician is held responsible for the medical operation of the sickness compensation plan. The claimant for benefits must have filed a physician's certificate (*Sec. 7 (a) (4)*) and, "if directed to do so by the director, (shall) have submitted to a medical examination for the purpose of determining his sickness." (*idem*).

In practice this requirement would charge practicing physicians not only with administrative responsibilities but with under-writing responsibility as well. E. H. O'Connor, managing director, Insurance Economics System of America, has stated, "As these state plans begin to expand, as is evident from legislative bills introduced in Rhode Island, California and New Jersey, more benefits will be paid and the cash sickness benefits of a state fund must be protected. It will naturally follow that the state will be forced to set up rules and regulations for the certification of claimants . . ."

Solvency of a state fund might be protected if it were possible to determine ability to work in all instances through promulgation of rules, and regulations and the application of existing medical knowledge. Every physician knows there are many instances where it is absolutely impossible to determine medically whether a person is or is not able to work.

This is particularly true in cases of mental illness. The definition of "sickness" (*Sec. 3 (m)*) contains the words ". . . because of his physical or mental condition, he is unable to perform his regular or customary work;". It was stated in Federal Security Administrator Oscar R. Ewing's report to the President that from 30 to 50 per cent of all persons consulting doctors have complaints due at least in part to emotional disorders. For the evaluation of these complaints it is stated 4500 psychiatrists are available in this country where some 15,000 are needed.

From the point of view of the medical profession, charged with the responsibility of certification and professional administration, it cannot be too much stressed that this program concerns itself essentially with temporary disability. Experience has emphasized the importance of adequate administrative control for the successful operation of such plans. We wish to stress that the evaluation of conditions of temporary disability depends upon factors which are at best 50 per cent subjective.

The dangers to the solvency of the cash sickness compensation fund from malingering have been recognized by the architects of this bill. "He (the director) shall also publicize the potential results of malingering." (*Section 18.*) In view of what has been said above concerning the subjective factors of temporary disability it must be made clearly apparent that merely designating the physician as the policeman is not the answer. There are no magic tests for the evaluation of purely subjective symptoms.

For the 6750 physician fellows of the Massachusetts Medical Society we feel we can promise full co-operation within the code of ethics of the Society and of the American Medical Association within the limitations previously noted. We point out, however, that no criteria for diagnoses are established within the bill and there is no provision for a medical advisory board to assist in this and other important functions under the bill.

The bill defines a "physician" (*Section 3 (s)*) as "an individual licensed to practice medicine or dentistry under the laws of this or any other state." For some 2500 physicians licensed to practice in Massachusetts the added ethical controls over fellows of the Massachusetts Medical Society are absent. For them the basic legal controls of malpractice laws are the limits to which they can be held.

Under *Section 8. Claims and Appeals (e)* provision is made for calling as an expert witness any medical adviser appointed by the director. There is no provision made for establishing the qualifications of such experts.

In view of the tremendous responsibilities placed upon the individual physician and upon the medical profession in the administration of this plan, we seriously question the absence of the physician's voice in the set-up for administrative control.

This defect is the more notable since *Section 12. Penalties* states, "Any person convicted of a violation of any provision of this chapter or of a violation of any order, rule or regulation of the director or of the division made under the authority of any provision of this chapter, the punishment for which is not otherwise provided, shall be punished by a fine or not more than fifty dollars for the first offense, and for any subsequent offense within a period of two years immediately following his final conviction of a like offense by a court of the Commonwealth, shall be punished by a fine of not less than fifty dollars nor more than two hundred dollars, or by imprisonment for not more than two years, or both."

Respectfully submitted for the President and Fellows of the Massachusetts Medical Society.

/s/ JOHN F. CONLIN, M.D.
JOHN F. CONLIN, M.D.
Director of Medical Information and Education

APPENDIX NO. 6

REPORT OF THE SUBCOMMITTEE ON NATIONAL LEGISLATION

The Subcommittee on National Legislation met during the annual meeting of the Society at Worcester on two occasions to consider the provisions of a mimeographed bill sent by Representative Herter to the Society for criticism prior to introduction into the Congress. The Subcommittee's criticism of this bill, which was subsequently introduced by Mr. Herter and others in the House (H.R. 4918) and by Senators Flanders and Ives in the Senate (S. 1970), is appended hereto.

After the annual meeting the Subcommittee met with the Committee on Medical Economics on three occasions, and it is anticipated that there will be additional joint meetings of these two groups. National legislation and medical economics are so inextricably bound together that it seems injudicious for two committees independently to consider the problems involved.

Letters expressing opposition to extension of the Social Security Act to cover physicians (H.R. 2893) and opposition to the inclusion of health and medical functions in a proposed Department of Welfare (Reorganization Plan No. 1 of 1949) were sent to all the Massachusetts senators and representatives in Congress as well as to the committee hearing the proposals. Copies of these letters are appended hereto.

When Reorganization Plan No. 1 came to vote in the Senate, Senator Saltonstall voted against it and Senator Lodge voted for it. Senator Lodge explained his action on the grounds that the Hoover Commission had recommended the establishment of a Department of Welfare and that he (Lodge) was not convinced that once such a department was established, it would be virtually impossible to remove its health and medical functions.

The chairman of the Subcommittee attended two meetings of the Committee on Legislation held subsequent to the annual meeting.

ELMER S. BAGNALL, M.D.
DAVID L. BELDING, M.D.
VLADO GETTING, M.D.
AUGUSTUS THORNDIKE, M.D.
WILLIAM H. SWEET, M.D.
CHARLES G. HAYDEN, M.D., *Chairman*

May 26, 1940

Hon. Christian A. Herter
House of Representatives
Washington 25, D. C.

My dear Congressman:

The Subcommittee on National Legislation of the Massachusetts Medical Society sincerely appreciates your in-

terest in the health of the Nation and the people of Massachusetts. It also appreciates the opportunity afforded to scrutinize the proposed National Health Act of 1949.

Because it is impossible in a few days to analyse thoroughly all the implications of a bill of this type, the Subcommittee is submitting herewith a few preliminary observations for your consideration. (See attachment.)

In general, it appears that this bill endeavors to establish a comprehensive system of medical and hospital care, utilizing voluntary prepayment plans and avoiding compulsion insofar as the potential subscriber is concerned. There is no mention made of employer contribution nor is the method of financing clearly defined. Ostensibly, subscribers would pay in accordance with their ability, and pools of reserves would be established to subsidize plans overburdened with poor risks. It seems that the chief financial burden would be carried by those with greater-than-average income who would pay in much more than they would receive in the form of benefits.

The plan visualized is not an insurance program because it offers services which do not lend themselves to actuarial determinations. Just how those persons and institutions who would render the services are to be included in the program and compensated for their efforts is not clear. While the bill does not say so explicitly, there are indications that it is an attempt to synthesize prepayment and group practice and extend the result nationwide. While such an amalgamation may have transcending merit, the available evidence at this time is far from conclusive.

From an administrative standpoint, the bill is replete with conflicting interests and duties vested in several boards, authorities and councils.

It is the opinion of the Subcommittee that this bill, if passed, would utimately result in the absorption by the Federal Government of voluntary, non-profit, prepayment medical and hospital care plans.

Although much is currently being voiced and written about the health of the nation and the availability and cost of medical care, no one has yet been able to define adequate medical care in terms that are practical and realistic. Until this is done and until there is general agreement on basic facts and concepts, it will be impossible to properly evaluate the problem, let alone suggest a reasonable answer. Therefore we propose that an impartial body patterned after the Hoover Commission be constituted on the National level to correlate the activities of similar Commissions established in the several States; that these Commissions be given ample opportunity to establish facts and evaluate concepts; and that upon completion of their tasks all interested parties sit down together and work out the kind of medical care that will adequately serve the needs of a free people.

Respectfully yours,

By direction of the President of
Massachusetts Medical Society,
ARTHUR W. ALLEN, M.D.
CHARLES G. HAYDEN, M.D., *Chairman*
Subcommittee on National Legislation

PRELIMINARY OBSERVATIONS CONCERNING THE PROPOSED "NATIONAL HEALTH ACT OF 1949"

By the Subcommittee on National Legislation of the Massachusetts Medical Society

1. The provision that the Surgeon General, subject to approval of the Federal Security Administrator, shall make such administrative regulations and perform such other functions as he finds necessary to carry out the provisions of Title VII is in keeping with current practice. We believe, however, that the medical activities of the Federal government should be co-ordinated in an independent agency directly responsible to the President.

Furthermore, it appears that, except for certain loans, the medical care aspects of this program are to be financed by premiums obtained from subscribers in accordance with their ability to pay. If this is so, regulatory supervision by the Federal government without financial participation might well be questioned.

2. The provision that the Federal Health Council shall be composed of persons who are not professionally engaged in the provision of health services would seem to be injudicious. It is our feeling that such a body should, in its own interest and that of the public, include persons actually engaged in the provision of health services.

3. The list of Personal Health Services to be provided contains many services which are not insurable because they are subject to serious abuse. In order to provide all the services listed it would appear to be necessary to alter fundamentally the existing pattern of medical, hospital and related practice. The bill does not state how this is to be accomplished.

4. The term, "licensed physicians" would seem to include chiropractors, osteopaths, and others, if licensed by the State. Only fully qualified physicians and surgeons should be allowed to participate.

5. The restrictions placed upon the organization and operation of Co-operating Prepayment Health Service Plans would, in our opinion, result in the abandonment of such plans by just those conscientious and able citizens who should be on the governing boards. For example:

a. Benefits offered must be within limits authorized by the State's program.

b. Contracts must be approved by the Health Region Authority.

c. Enrollment will be limited by the Health Region Authority which will also determine the mechanism of enrollment (individual, group, etc.)

d. Reserve requirements will be established by the State Health Council.

e. Adjustments in subscription charges must be made in certain instances as required by the State Plan.

f. Subscription charges must be fixed in terms of subscriber's family income.

g. Rules and regulations will be determined by the Surgeon General, the State Agency, the State Health Council, and the Health Region Authorities.

h. Selection Factor will be determined by the Surgeon General.

6. The provision that the State Plan shall be administered by a single State Agency subject to the powers of the State Health Council and Health Region Authorities (and the Surgeon General) would seem to make for divided authority and inefficient administration. The possibility that two or more contiguous states may be involved is subject to this same criticism. Also, the lack of correlation between the proposed agencies and those already in existence (State and local health departments, etc.) might well result in conflict, overlapping, inefficiency and waste of funds.

7. The provisions that the Health Region Authority shall be composed of persons who do not hold positions of administrative responsibility for any health program or other activity of the State or any political subdivision thereof, and who are not professionally engaged in the provision of health or medical services again bars just those persons whose knowledge and experience would be invaluable.

8. The requirement that each Health Service District include within its area a four-year medical college would seem to impose unrealistic geographic arrangements.

9. The requirement that the State Health Council determine and prescribe the kinds of personal health services to be provided and the reserve requirements therefor, circumvents State Insurance Departments which are already authorized to make such determinations in most States.

10. The provision that prepayment health service plans shall subsidize medical schools is unique. As the program visualized is not compulsory, the burden of subsidization would fall on subscribers alone and not on the general public, all of whom should contribute if governmental subsidy is necessary and desirable.

11. Fixing of subscription charges in terms of a percentage of the subscriber's family income would seem to introduce serious administrative difficulties. How, for instance, is family income to be determined in those instances where more than one member of the family is employed, or where there is income other than wages or salary?

12. The provision for creation of a Study and Planning Commission has merit. It is our opinion that a Commission similar to the Hoover Commission should be constituted in every State and that the activities of these

several State Commissions should be correlated by a similar Commission on the Federal level. Furthermore, we believe that until such time as these Commissions have submitted their findings and recommendations, legislation in this field should be delayed.

13. We favor in principle extension of the hospital construction program. Because of the limited time available, that portion of the bill dealing with this subject was not analyzed.

14. We favor in principle establishment of local public health units. Because of the limited time available, that portion of the bill dealing with this subject was not analyzed.

July 6, 1949

Senator Henry Cabot Lodge, Jr.
Senate Office Building
Washington, D. C.

Dear Senator Lodge:

There are two social security bills before the House Ways and Means Committee certain provisions of which, if enacted into law, would intimately involve the medical profession. These are H. R. 2892 and H. R. 2893.

As originally written, H.R. 2892 contained a provision which would institute medical assistance for certain categories of indigents. We shall reserve our comments on this provision until such time as we may have the opportunity of examining the revised bill.

H.R. 2893, as revised, is reliably reported to contain a provision broadening the coverage of the Social Security Act to include most self-employed persons but excluding farmers. A tax of perhaps 2¼ per cent on income up to $4200 or $4800 would be levied for the purpose of providing old-age benefits at age 65 to those self-employed who at that age reture from business as well as cash benefits for permanent disability.

Because few physicians retire at age 65 and because virtually complete retirement is necessary to qualify for an old-age pension, physicians would be compelled to contribute for years to a fund from which few if any would ever derive benefits. We are, therefore, opposed to extension of the Social Security Act to include physicians.

Respectfully submitted
By Direction of the President
CHARLES G. HAYDEN, M.D., *Chairman*
Subcommittee on National Legislation

July 21, 1949

Senator Joseph R. McCarthy
Senate Committee on Expenditures in the Executive Offices
Senate Office Building
Washington, D. C.

Dear Senator McCarthy:

On June 20, 1949, President Truman, exercising authority delegated to him in Public Law 109, submitted to the Congress Reorganization Plan No. 1. Under this Plan a Department of Welfare will be created to take over and perform the functions and conduct the programs now administered by the Federal Security Agency. Reorganization Plan No. 1 will automatically go into effect on August 19, 1949 if Congress is still in session on that date or unless prior to that date either House of Congress passes a simple resolution against it by the affirmative vote of a majority of the authorized membership of that House.

The Massachusetts Medical Society opposes the inclusion of federal health and medical functions in a Department of Welfare. Instead, it has for some time favored the creation of a Department of Health or, if such is not feasible at this time, the creation of an independent federal agency similar to the United Medical Administration recently recommended by the Hoover Commission. The compelling arguments for a United Medical Administration as elaborated by the Hoover Commission are well known and need not be recounted here.

When President Truman submitted Reorganization Plan No. 1, he stated that the creation of a Department of Welfare, including health and medical functions, would not in any way interfere with the presentation of additional reorganization plans such as one establishing a United Medical Administration. However, Federal Security Administrator Oscar R. Ewing is now on record as being opposed to the removal of health and medical functions from the Federal Security Agency and, inferentially, from the proposed Department of Welfare. The Massachusetts Medical Society believes that once federal health and medical functions are lodged in a Department of Welfare, it will be next to impossible to remove them.

In the interest of economy and efficiency, the Federal Security Agency (Administration) has been subjected to several reorganizations. The Reorganization Act of 1939 was designed to, "reduce expenditures, increase efficiency, consolidate agencies according to major purposes, reduce the number of agencies by consolidating those having similar functions and by abolishing such as may not be necessary, and to eliminate overlapping and duplicating of efforts." The Reorganization Act of 1946 had similar purposes. It changed the Federal Security Agency (Administration) from a holding company with a small staff and a small budget to an operating agency which has burgeoned to incredible proportions. Prior to 1946, there existed three component bureaus — one each for health, education, and social security; now there exists a single agency headed by an administrator with a group of assistants. In 1939 there were five top administrative jobs in the bureaus dealing with health, education, and social security. These jobs paid about $10,000 each and were held by the Surgeon General of the Public Health Service, the Commissioner of Education, and the three members of the Social Security Board. At the present time (1950 budget) provision is made for a Federal Security Administrator at $12,000; three assistant administrators at $10,000 each, nine more officials at $10,000 each, four at more than $9900 each, and six at over $9000, or a total of twenty-three positions at over $9000 each — and these only include persons in the office of the administrator. When the three-person Social Security Board was abolished and replaced by a Commissioner of Social Security, other positions were created for the remaining two members of the Board.

In 1946, prior to reorganization, Federal Security Administration expenditures were $743,000,000. In 1946, following reorganization, they jumped to $928,000,000. In 1948 they were $1,028,000,000; and in 1949, $1,370,000,000. In 1950 they will be $1,511,000,000 under existing legislation and $1,897,000,000 under proposed legislation.

Whether the previous reorganizations of the Federal Security Agency (Administration) have accomplished the purposes intended by the Congress is debatable, but that they have resulted in a serious potential concentration of power and influence over the daily lives of a significant segment of the population of this Nation seems beyond question.

The attitude of Federal Security Administrator Ewing toward the medical profession is well known and need not be elaborated here. Inasmuch as Mr. Ewing would no doubt become the first Secretary of Welfare, his attitude, corresponding as it does with the attitude of the present Minister of Health in England, Aneurin Bevan, is not likely to inspire confidence or a will to co-operate on the part of the medical profession in the solution of the intimate problems of medical care.

Respectfully submitted
By direction of the President
CHARLES G. HAYDEN, M.D., *Chairman*
Subcommittee on National Legislation

August 10, 1949

Senator Henry Cabot Lodge, Jr.
Senate Office Building
Washington, D. C.

Dear Senator Lodge:

In a final attempt to dispel any misunderstanding in regard to the Hoover Commission's recommendations as they relate to Reorganization Plan No. 1, the following quotations from the report of the Voorhees Task Force and the Hoover Commission itself are respectfully presented.

"Task Force Report on Federal Medical Services (Appendix 0)
Prepared for
The Commission on Organization of the Executive Branch of the Government
January, 1949

". . . . According to your chairman's instructions, we have proceeded upon the assumption that the Commission will recommend a new cabinet-level department embracing health, education, and security, in which the broad field of health will be one of the three major functions; also that standard Government nomenclature below the department level will be 'bureau' and thereafter 'division.' We, therefore, describe the health organization which we propose as the National Bureau of Health in such new department.

"The above instructions excluded from our consideration the question as to whether a separate Cabinet department would be established for health alone, as urged by professional groups. However, should this be done, the organization which we are proposing would be adapted to such plan with only a few changes in nomenclature." (Page xix)

"Task Force Report on Federal Medical Services
(Supplement to Appendix 0)
Prepared for
The Commission on Organization of the Executive Branch of the Government
March, 1949

"As our committee had been instructed to assume that any consolidated health organization would be a part of a new cabinet-level department embracing health, education and security, which the Commission would recommend, our main report contained on page 1 the following statement: 'The above instructions excluded from our consideration the question as to whether a separate cabinet department would be established for health alone, as urged by professional groups. However, should this be done, the organization which we are proposing would be adapted to such plan with only a few changes in nomenclature."

"Thus, we answered in the affirmative the question as to whether the organization, which we originally designated as the National Bureau of Health, could function as an independent department or agency.

"It remains to consider whether such an alternative would be preferable. This question has been fully considered by our committee, and we have reached the conclusion that such an independent organization would be preferable to placing this function in a larger department, as the Commission originally proposed." (Page 1)

"Reorganization of Federal Medical Activities
A report to the Congress by the Commission on Organization of the Executive Branch of the Government
March, 1949

". . . Recommendation No. 1. To accomplish these purposes, the Commission recommends the establishment of a United Medical Administration into which would be consolidated most of the large-scale activities of the Federal Government in the fields of medical care, medical research, and public health (in which we include preventive medicine) . . . ." (Page 2)

Although the Hoover Commission in another report advocated the establishment of a Department of Welfare, it is clearly the intent of the above recommendations that federal health and medical services should be excluded from such a Department.

The Massachusetts Medical Society has taken no stand in regard to the establishment of a Department of Welfare from which federal health and medical functions would be excluded. It is, however, opposed to the establishment of a Department of Welfare which, contrary to the well substantiated recommendations of the Hoover Commission, would include federal health and medical functions.

Respectfully submitted
By direction of the President
CHARLES G. HAYDEN, M.D., *Chairman*
Subcommittee on National Legislation

August 11, 1949

Senator Henry Cabot Lodge
Senate Office Building
Washington 25, D. C.

Dear Senator Lodge:

I have tried, without success to date, to achieve an estimate of the amount of money which might be saved were a United Medical Administration established. If I come upon this information prior to the end of next week, I shall send it to you by wire.

At the moment all I can say is that it seems likely that Congress would have better control of appropriations for health and medical functions if these functions were consolidated instead of being scattered throughout some forty odd divisions and bureaus as is now the case and as they would continue to be scattered under proposed Reorganization Plan No. 1.

Respectfully submitted
By Direction of the President
CHARLES G. HAYDEN, M.D., *Chairman*
Subcommittee on National Legislation

August 15, 1949

Senator Leverett A. Saltonstall
Senate Office Building
Washington, D. C.

Dear Senator Saltonstall:

The Massachusetts Medical Society believes that once federal health and medical functions are lodged in a Department of Welfare, it will be next to impossible to remove them for the following reasons:

1. Federal Security Administrator Oscar R. Ewing, who, as payment for his services during the last Presidential campaign, would no doubt be the first Secretary of Welfare, has testified that he will resist the removal of health and medical services from such a Department.

2. The President in his letter transmitting Reorganization Plan No. 1 and in his recent letter to Vice President Barkley studiously avoided mentioning his intentions in regard to the establishment of a United Medical Service. It would have been an easy matter for him to have stated flatly that, subsequent to the establishment of a Department of Welfare, he would introduce a plan designed to remove health and medical functions.

3. It is a well-known fact that it is much easier to exclude functions from a department or agency before it is established than to remove functions later. The anomalous autonomy of the Children's Bureau is an excellent illustration of this point.

4. Elevation of the Federal Security Administration as is will accomplish nothing that is not already capable of accomplishment.

5. At the present time forty different federal agencies furnish some degree of medical care to 24,000,000 persons. It would seem logical that first priority be given to this wasteful and extravagant situation.

6. None of the Reorganization Plans so far submitted by the President will result in economy but all will effect a concentration of political power and prestige.

Respectfully submitted
By direction of the President
CHARLES G. HAYDEN, M.D., *Chairman*
Subcommittee of National Legislation

APPENDIX NO. 7

REPORT OF THE COMMITTEE ON ARRANGEMENTS

The Committee on Arrangements wishes to report that the dates of May 15, 16, 17 and 18, 1950, have been selected for the 1950 annual meeting of the Society, and that the next annual meeting of the Council will be held on the evening of May 15 in Boston.

It is recommended that these dates be approved by the Council.

GORDON DONALDSON, M.D.
ALBERT EHRENFRIED, M.D.
JAMES A. HALSTED, M.D.
JOHN W. NORCROSS, M.D.
FRANKLIN G. BALCH, JR., M.D., *Chairman*

APPENDIX NO. 8

Report of the Committee on Public Health

On August 10, 1949, a meeting of the Committee was held at the Hotel Kenmore, Boston, to discuss the relation of the Massachusetts Medical Society to the increased incidence of poliomyelitis. Present at this meeting were the following: Arthur W. Allen, M.D., H. Quimby Gallupe, M.D., Joseph Garland, M.D., Charles Bradford, M.D., Vlado A. Getting, M.D., Roy Feemster, M.D., Roy J. Ward, M.D., Alfred L. Frechette, M.D., Warren R. Sisson, M.D., and John J. Poutas, M.D.

The first item of business was the election of a secretary for the Committee. John J. Poutas, M.D., was re-elected secretary for the fourth conservative year.

Next on the agenda was consideration and approval of proposed minimal "Standing Orders" for use in convalescent and nursing homes. This material was submitted to the committee by Dr. Alton S. Pope, deputy commissioner of Health, and was discussed at this meeting by Dr. Getting, commissioner of health. The purpose of the standing orders is to restrict self-medication to a minimum. The proposed standing orders were read by the secretary, and it was pointed out that they are "minimals." It was moved and voted that they be approved in principle.

A letter, written by Francis C. Hall, M.D., president, New England Chapter, Arthritis and Rheumatism Foundation, to Dr. Arthur W. Allen, was read in which the assistance of the Society was requested in a survey to ascertain the number of arthritis clinics in the State and to render advice regarding encouragement and expansion of any existing clinics and the wisdom of establishing new clinics.

The Committee voted approval of this survey and recommended that it be accomplished with and through the office of the Commissioner.

A request by the same foundation that an arthritis subcommittee of the Committee on Public Health be appointed was approved and it is accordingly referred to the Council for necessary action.

The main item of business on the agenda consisted of a detailed discussion of the situation in the State and country with respect to infantile paralysis.* Drs. Getting and Feemster gave a very detailed outline of the problem and presented the following for committee action:

A proposed newspaper release to the effect that the Committee on Public Health and the Massachusetts Department of Public Health had jointly considered and approved a set of recommended practices for the control of poliomyelitis adopted by a national conference in Ann Harbor, Michigan, in June, 1949, under the auspices of the National Foundation for Infantile Paralysis. The Committee considered in detail the proposed release, and approval was duly voted.

It was also proposed and voted that these recommended practices be given the earliest possible publication in the *New England Journal of Medicine* and disseminated to all physicians.

The advisability of radio broadcasts by a panel of physicians on the general subject of infantile paralysis was discussed, moved and voted.

The Committee then formally offered its commendation to Dr. Getting for the excellence of his department and the splendid and effective co-operation it has always shown to this committee.

Alfred L. Frechette, M.D.
John J. Poutas, M.D.
Warren R. Sisson, M.D.
Conrad Wesselhoeft, M.D.
Roy J. Ward, M.D., *Chairman*

*Two additions to the report were made by the Council by recommendation of the Committee — namely, approval of the survey of multiple sclerosis by the Harvard School of Public Health and approval of the Chest X-Ray Program in Boston.

APPENDIX NO. 9

Report of the Committee on Membership

A regular meeting of the Committee on Membership was held on August 10, 1949. The Committee discussed the question of the possibility of amending the by-laws relating to applicants for membership in the Society with particular reference to Chapter 5, Section 2b, which states that "applications from a graduate of a discontinued medical school or a foreign medical school may apply only when the applicant has possessed a license to practice medicine in the United States or its territories for at least five years."

It was felt that the original reason for this by-law was largely past since the last unapproved medical school had now been closed.

It was felt further that there would be a few cases in which an unjust hardship would be placed upon some well intentioned graduate of an unapproved school if he was not allowed to have the privilege of membership in the Society during the first five years of his practice.

Therefore, it was voted that it be recommended that the following change be made in paragraph 2 of Section 2(b) of Chapter V: "The applicant has possessed a license to practice medicine in the Commonwealth and has conducted that practice in the district from which he makes application, for at least one year."

The following reasons for this change are given: knowledge of the doctor by his fellows for one year is better than registration for any length of time elsewhere; the Committee on Membership has often turned down otherwise eligible candidates because they were not known in the town or city for at least a year; the first five years of practice are the hardest, and the by-laws make them more difficult because the doctor cannot become a staff member in an approved hospital until he is a fellow of the Society and he cannot, therefore, take advantage of the Gallupe Plan because most hospitals stick to the ruling mentioned above; if this by-law were changed, more hospitals would accept the Gallupe Plan; the applicant would be able to give better care to his patients; this is the ultimate objective of the Society; it would be a good public-relations effort; and the number of such applicants is steadily decreasing.

The vote was four in favor of this recommendation and one opposed (by proxy).

William A. R. Chapin, M.D.
Henry F. Howe, M.D.
Donald Munro, M.D.
Samuel N. Vose, M.D.
Lewis S. Pilcher, M.D., *Chairman*

APPENDIX NO. 10

Report of the Committee on Society Headquarters

It is the opinion of the Committee that a survey to see what is the best thing to do for the future home of the Society should be made, and that the present headquarters, the present facilities, and the possibility of obtaining more land and buildings in the near neighborhood, such as the Bostonian Hotel and the tenements on Hemingway Street across from the Library should be examined, the possibility of acquiring land at the dam site where the Boston Museum of Natural History is contemplating building should be investigated and that it should be known whether or not it might be advisable to obtain a piece of land and combine, on this land, the Medical Library, the *Journal* office, the headquarters, and a building for the Massachusetts Medical Society in co-operation with the School of Public Health of Harvard, which is moving to build a new building, and combining, at the same time, with the Department of Public Health. It is recommended that the Society employ a man to survey all the possibilities and make a final report to the Council. It is also recommended that a sum, not exceeding $5000, be appropriated to carry out the thorough survey that is recommended.

Joseph S. Barr, M.D.
Albert A. Hornor, M.D.
Dwight O'Hara, M.D.
Walter G. Phippen, M.D.
Frank R. Ober, M.D., *Chairman*

APPENDIX NO. 11

Report of the Committee on Industrial Health

The Committee met at the Harvard Club on July 20, 1949, to outline a program for the coming year. Besides the members of the committee, Dr. William Fleming, of Boston University, Dr. Dwight O'Hara, of Tufts, Dr. Albert Seeler, of Harvard School of Public Health, the members of the Advisory Committee and the officers of the Society were present.

The following suggestions were made concerning the program: a survey should be made of the industrial-health facilities in the State, the need for instruction in industrial health in medical schools, in postgraduate courses and in industrial plants, the need for a series of programs for professional and lay people concerning industrial-health problems, the need for a clearing house of industrial-health information, and the need for insurance covering the worker for industrial and nonindustrial disabilities.

The Committee recommends that an industrial-health conference be held in Boston on December 14, 1949, under the auspices of the Society. The program will consist of a morning session devoted to industrial medicine and surgery; an afternoon session for management, labor, state agencies and insurance companies; and an evening session of general interest to all.

If this recommendation is approved, the conference program will be directed by Dr. George Wilkins, Dr. Karl Benedict and Dr. John Poutas.

The survey of industrial-health facilities will be conducted by Dr. George Morris, Dr. Harriet Hardy and Mr. William Seymour.

KARL T. BENEDICT, M.D.
HARRIET L. HARDY, M.D.
DANIEL L. LYNCH, M.D.
GEORGE E. MORRIS, M.D.
JOHN J. POUTAS, M.D.
GEORGE F. WILKINS, M.D.
HENRY C. MARBLE, M.D., *Chairman*

APPENDIX NO. 12

REPORT OF THE COMMITTEE TO MEET WITH THE MASSACHUSETTS HOSPITAL ASSOCIATION

Since the request from Norfolk District Medical Society to the Council "for a delineation of the developments which had taken place regarding the report of the Committee on Special Services" and the resolution from the joint Committee of the Anesthesiologists, Pathologists, Physical Therapists, and Roentgenologists that "the Committee from the Massachusetts Medical Society to meet with the Massachusetts Hospital Association be instructed to take steps to expedite the acceptance and practice of the principles enunciated by the Committee to study Special Services" are so similar as to be practically concomitant they will be answered together.

First we wish to quote from the report made to the Council on May 24, 1948, by this committee of the previous conference held March 3, 1948, with the Committee on Professional Services of the Massachusetts Hospital Association when we tried to get their approval of the principles enunciated by the Committee to Study Special Services. The Society was represented by Drs. Bagg and Gallupe and four members of the Committee, which included Dr. McKittrick. The Hospital Association was represented by Dr. Norbert A. Wilhelm, of the Peter Bent Brigham Hospital, and Mr. Warren F. Cook, of the New England Deaconess Hospital.

> Arguments about why these principles should be approved by the Hospital Association were presented, chiefly by Drs. Bagg and McKittrick. Dr. Wilhelm stated that his committee had met the day previously and had voted that no action be taken at this time. Their decision was based chiefly upon their belief of the uncertainty whether the Blue Cross could continue to provide adequate prepaid hospital insurance. As hospital administrators they believed its successful operation was essential to the welfare of hospitals, and they refused to approve anything they thought might further embarrass it. They also said that because of poor public relations on the part of the hospitals, a more complicated system of billing hospital costs to the patient would be too confusing and undesirable to be undertaken. Incidentally, they stated they believed that very few hospitals had a system of accounting sufficiently comprehensive to be able to work out all details of cost accounting that would be necessary under this plan.
>
> There was a great deal of discussion during which the representatives of the Society tried unsuccessfully to convert the representatives of the Association to its point of view. They were unwilling to grant their approval of these principles even though the Society agreed to the postponement of their adoption until a later date because they believed that in these days when the Blue Cross and so many hospitals are in great financial distress, the whole question of voluntary hospital service is at stake. They insisted that now was not the time to undertake the adoption of these principles. Although the Committee believed in the fairness of these principles and urged their adoption, it was believed that the representatives of the Association were sincere in their point of view. As a result of this conference, it was believed that nothing more could be done at present.

From this quotation it is obvious that the statement contained in the preamble to the resolution presented by the Joint Committee of the Anesthesiologists, Pathologists, Physical Therapists, and Roentgenologists that "it was decided not to press for acceptance and practice of the principles enunciated by the Committee to Study Special Services at that time, etc." does not represent the intentions, the sincerity, or the efforts of the Committee at that meeting. There was plenty of explanation, persuasion, and pressure on the part of the Committee but they, particularly Dr. Wilhelm, were steadfast in refusing to agree to anything for the reasons given.

Late last fall the Chairman, mindful of the Council vote that this committee continue its efforts, consulted the secretary of the New England Pathological Society (Dr. Nickerson), who was a member of the original Committee to Study Special Services as to whether or not they wished us again to communicate with the Committee on Professional Services of the Massachusetts Hospital Association for more discussion of the McKittrick Report. He was told that they did not at that time, since the general situation was unchanged. He stated that with Dr. McKittrick on both the Blue Shield and Blue Cross boards, he felt the interests of the special services would be safeguarded. He also said they might again bring up their problem at a later time. That request was made at the Council Meeting on the evening of May 23 in a resolution representing a Joint Committee of the Anesthesiologists, Pathologists, Physical Therapists, and Roentgenologists requesting this committee "to take steps to expedite the acceptance and practice by the Massachusetts Hospital Association of the principles enunciated by the Committee to Study Special Services."

The second and most recent meeting with the Professional Services Committee of the Massachusetts Hospital Association was held June 30, 1949. This time each side was represented by a new committee. On that for Professional Services of the Hospital Association were Dr. Guy W. Brugler, director of the Children's Hospital; Mr. Warren F. Cook, executive director of the New England Deaconess Hospital; and Mr. Paul F. Nallon, superintendent of the Hampden County Hospital in Greenfield.

The Committee representing the Society now has an anesthesiologist, a pathologist and a roentgenologist.

Present at this meeting were the members of the Committee and Dr. Leland S. McKittrick, president-elect of the Society. Dr. Arthur W. Allen, president of the Society, attended a conference held prior to the meeting with the Hospital Association and joined in a discussion of the problem. Dr. Brugler and Mr. Nallon appeared for the Hospital Association. Mr. Cook sent word that he was unable to attend although we did not know it until the conference began. Also, the date for the meeting had been arranged through his office before the notices were sent out.

Beginning with Dr. Donald A. Nickerson, pathologist at the Salem Hospital, where the principles in the McKittrick Report were accepted and put in practice a year ago, the Committee did the best it could by explanation, argument and persuasion to convince the two members of the Professional Services Committee that the Massachusetts Medical Society really supports these principles enunciated by the Committee to Study Special Services. Dr. McKittrick spoke at length in favor of these principles and reported that the Massachusetts General Hospital is now reorganizing its departments to conform to them. Their attention was also called to the fact that the Committee on Hospitals and Practice of Medicine of the American Medical Association had included these principles in their report to the

House of Delegates, which was accepted, and gave a strong endorsement urging that they be approved and adopted generally.

Finally after about an hour and a half of discussion, during which we had done most of the talking and they had proved good listeners, we were told their committee lacked authority to act on our request and that the matter would be discussed at the meeting of their trustees in September. They were urged to try to hold a trustee's meeting before August 15 if possible, so that we might include their answer in our report for the October meeting. However, in a letter written July 11, Mr. Cook stated that it would be impossible to have a meeting of the trustees before September, and therefore no action can be taken on the McKittrick Plan by the Association by August 15.

We await their report anxiously and hopefully. If their answer is unfavorable, we shall request other conferences.

JOSEPH A. HOLMES, M.D.
STORER P. HUMPHREYS, M.D.
SIDNEY C. WIGGIN, M.D.
HARVEY MORRISON, M.D.
DONALD A. NICKERSON, M.D.
ALBERT E. PARKHURST, M.D., *Chairman*

APPENDIX NO. 13

REPORT OF THE COMMITTEE ON POSTGRADUATE MEDICAL EDUCATION

This is a brief report of progress. The Committee has had one meeting at which were present representatives from the various teaching centers throughout the State. At this meeting attempts were made to meet the wishes of the local district chairmen regarding the nature and the conduct of educational programs for the year. Plans to implement these various programs are now under way.

One other item is worth reporting at this time. For reasons of convenience and economy, it seems best to all concerned to transfer the exercises formerly held at Sanders Theater to John Ware Hall at 8 Fenway for the coming season.

W. RICHARD OHLER, M.D., *Chairman*

APPENDIX NO. 14

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

Several meetings of the committee were held through the summer months jointly with the Subcommittee on National Legislation on invitation of Dr. Hayden, its chairman.

Several important matters are under consideration by the members of these committees, ably assisted by a few elder statesmen of the Society. Report on these discussions at present would be premature, but in general this group is endeavoring to implement previously adopted policies aiming toward better co-ordination of groups concerned in the distribution of medical care in Massachusetts. We presently expect to have some of these matters ready at the next meeting of the Council.

The Council had referred back to the Commitee on Medical Economics for clarification paragraph 13 of the fourteen paragraphs adopted jointly with the Committee on Public Relations on February 9, 1949.

We discussed the wording in comparison with the American Medical Association principle No. 12, which asks for "adequate support with funds free from political control" and so forth. It was suggested that the "free from political control" qualification might be debatable strategically because strictly speaking, political control in the best sense would be proper in an assumed good government. When Government provides funds it must, to a proper degree, regulate the expenditures. However, the committee suggests the following new wording for paragraph No. 13:

> We agree that the federal Government may properly assist financially such medical schools as are found unable to meet their operative costs, upon their request for such assistance; *provided* that such assistance shall not be construed as authorizing any federal department, agency, officer, or employee to exercise any supervision or control over the admission of students, curriculum, teaching personnel or administration of such medical schools; except such supervision as may be necessary to insure that grants shall be expended solely for the purposes for which they are made.

We believe effective organization of state and district health councils would immeasurably improve the community concept of local health needs. The initiative of the people themselves, and especially of the medical and public-health personnel, must provide the spark.

HAROLD M. FROST, M.D.
VLADO A. GETTING, M.D.
HUGH LEAVELL, M.D.
HENRY A. ROBINSON, M.D.
ELMER S. BAGNALL, M.D., *Chairman*

The fourteen proposals as finally adopted by the Council were as follows:

(1) The objective of adequate medical care in our free society is to make available to everyone — regardless of race, color, creed, financial status or place of residence — every known essential preventive, diagnostic and curative medical service of high quality. The attainment of such medical care must necessarily be an evolutionary process, which will require the co-operation of all concerned over a period of years.

(2) The principle of voluntary prepayment health insurance should be the basic method of financing medical care for the large majority of the American people, in order to remove the burden of unpredictable sickness costs and abolish the economic barrier to adequate medical services.

(3) The success of any plan for medical care is dependent on the mutual co-operation of the public, those rendering professional services and the administrative agencies. This co-operation can be obtained only if those rendering the services are convinced that they will have a continuing authoritative voice in the formulation and execution of policies and plans, thereby assuming their proper share of responsibility.

(4) Voluntary prepayment group health plans, embodying group practice and providing comprehensive service, when practicable, sometimes offer their members adequate medical care. No such plan shall be obstructed in procuring enabling legislation. No physician participating in such a plan shall be denied, by reason of participation per se, 1, membership in established medical societies; 2, hospital-staff appointments dependent upon such society memberships; 3, consultation courtesies by nonparticipating physicians on the usual plane of ethical relationship.

(5) The people have the right to establish voluntary prepayment plans on any basis guarded by legal restrictions necessary to assure proper standards and qualifications.

(6) Provision of adequate medical care for those unable to obtain it by voluntary prepayment plans or by direct payment is the responsibility of the local or state government. Part of the burden of this responsibility may be assumed by charitable agencies. Federal grant-in-aid to state programs administered by state boards of health is an acceptable method of helping to meet this responsibility.

(7) The medical care of those who are able to purchase it by voluntary prepayment plans or by direct payment is the responsibility of the individual.

(8) The federal Government, should, wherever possible, support voluntary prepayment programs for hospital and medical care.

(9) Eligibility for receiving benefits under a program aided by federal grants should be determined by the individual states or communities.

(10) The patient shall have free choice of his physician, group of physicians, clinic or hospital from among those participating in any plan, provided that the physician, group of physicians, clinic or hospital shall have the right to refuse or accept the patient.

(11) Physicians and other qualified persons rendering medical care shall receive adequate remuneration for their services.

(12) The physician shall be free to elect or reject without prejudice participation in a medical-care plan. The

rights of the physician as to the choice of methods by which he is to be paid shall be fully protected.

(13) We agree that the federal Government may properly assist financially such medical schools as are found unable to meet their operative costs, upon their request for such assistance; *provided* that such assistance shall not be construed as authorizing any federal department, agency, officer or employee to exercise any supervision or control over the admission of students, curriculum, teaching personnel or administration of such medical schools; except such supervision as may be necessary to ensure that grants shall be expended solely for the purpose for which they are made.

(We believe effective organizations of state and district health councils would immeasurably improve the community concept of local health needs. The initiative of the people themselves, and especially of the medical and public health personnel, must provide the spark.)

(14) The Massachusetts Medical Society looks upon these basic principles as essential to the development of any successful medical-care plan and, as guides by which to evaluate medical-care plans that may be proposed in the future, with the understanding that changing conditions may require their later revision.

APPENDIX NO. 15

Report of the Committee on New England Postgraduate Assembly

The New England Postgraduate Assembly will be held in the Copley Plaza Hotel on November 9, 10 and the morning of November 11. The central committee will hold a meeting early in the fall to approve final plans.

The scheduled time of meetings is the same as before, the papers being limited to one half hour. Twenty-four papers will be presented. All the speakers are from outside Boston. The subject matter is widely varied involving the various aspects and interests of all.

Through the courtesy of E. R. Squibb and Company, facilities of television have been offered to the Assembly for the morning of November 10 and 11. Inasmuch as installation of the transmitting equipment and transmitting the program involves considerable expense, it has been necessary to confine the television program to one institution. Lots were drawn and the first to be drawn was the New England Medical Center. It is thought that they will have invited talent from other hospitals to give as broad a representation as possible.

This is an innovation for the New England Assembly, and it is hoped that with careful attention to details it will become a very valuable adjunct to the meeting. It was initiated by Mr. Boyd when in discussion it was felt that the clinics at the various hospitals provided a very uncertain attendance.

On the evening of November 9 it is planned to have a smoker or jamboree in the State Suite of the Copley Plaza Hotel. It is hoped that doctors and their wives will participate in an evening of entertainment and social activities.

The dinner will be held in the State Suite of the Copley Plaza Hotel on the following night, Thursday, November 10. It is expected that a speaker of national prominence will provide an incentive for a satisfactory attendance.

The members of the registration committee are the secretaries of the district societies throughout New England and through Dr. Conlin's office will be kept informed of the developments of plans for the Assembly.

Applications for space at the Assembly have been very satisfactory.

Richard P. Stetson, M.D., *Chairman*

APPENDIX NO. 16

Report of the Committee on Diabetes

The Committee has held two meetings since the annual meeting of the Society in May. At the first, representatives of the district societies were present and consideration was given to the Diabetes Detection Program with particular reference to industry. It was noted that the Diabetes Detection Program throughout the United States has made progress and actually more than 90 committees or diabetes societies are organized in 37 states. The committees appointed for last year's drive have continued their efforts in many places and many new committees have been formed.

The Diabetes Detection Program is not a drive for funds. It represents an effort sponsored and conducted by American medicine to find and bring to treatment undiscovered diabetic cases.

The Diabetes Detection Drive was first approved by the House of Delegates of the American Medical Association on November 30, 1948, and again on motion of the New York delegate on June, 1949, at Atlantic City. It represents an effort wholly consistent with the national education campaign of the American Medical Association. This year the program of diabetes detection offers a variety of methods to the public. The time-honored method of diabetes detection is to have a urine and blood test in the family doctor's office as part of the regular, periodic health examination. In many communities, with the co-operation of doctors, public-health organizations, boards of health, tuberculosis associations and so forth, detection centers will be available for those who do not have regular physicians. A new principle of self-testing has been adopted this year by which a patient may purchase at a drug store the equipment for testing the urine and may then carry out the directions given in the equipment for making his own urine tests. The results are then to be reported to his family physician. The method now most effective has been a program managed by the county or district medical society in co-operation with public-health agencies by which free urine tests are especially offered to the relatives of known diabetic patients and often as part of a concerted campaign for chest x-rays. The Committee begs the co-operation of all members of the Society particularly in providing for free urine tests during Diabetes Week, October 16-16, 1949.

Frank N. Allan, M.D.
George Ballantyne, M.D.
Joseph Rosenthal, M.D.
William Mason, M.D.
Eoline Dubois, M.D.
James Townsend, M.D.
Priscilla White, M.D.
Howard F. Root, M.D., *Chairman*

APPENDIX NO. 17

Report of the Co-Ordinating Committee

On August 1, 1949, the chairman of the committee, after a conference with the officers of the Society and the editor of the *New England Journal of Medicine*, mailed to every councilor a bulletin that gives a picture of the activities of the Society in carrying out the American Medical Association educational campaign. The bulletin gives the names of fellows on the committee; it mentions the need for a positive program of medical care, the end of the National Physicians Committee and the action of the American Medical Association concerning Dr. Fishbein; it describes the meeting at the Hotel Statler on May 1 and the "Tell it to Twenty" program. The bulletin points out the matter of timing and emphasizes the disastrous effect of complacency and inactivity. A report of the highlights of the activities are summarized: 300 talks by 20 physicians to many types of groups, editorial support, the Massachusetts Health Conference on February 19 and 20; 30,000 pieces of literature distributed from 8 Fenway, and participation on the radio and other programs. The importance of the county-society activities is stressed by demonstration of the need for an active district-society committee, the "Tell it to Twenty" portion of the campaign, the need for resolutions against compulsory national health insurance, and the importance of a strong speaker's bureau and contacts with local press and radio facilities. The bulletin points out the importance of the Women's Auxiliary in the campaign, the need for personal contacts with congressmen. There is a list of the literature now available through the Society office.

The bulletin ends by urging all to use the literature effectively and to keep the Society informed at frequent intervals concerning the progress of the campaign in the eighteen districts.

Frank H. Lahey, M.D., *Chairman*

APPENDIX NO. 18

Report of the Committee to Write a Publicity Code

In accordance with the vote of the Council at their meeting on May 23, 1949, at which time it was moved and voted that "a committee of five write a Massachusetts Medical Society code to govern publicity," the following report and recommendations are submitted.

A. *It is recommended* that the following Publicity Code of the Massachusetts Medical Society be accepted:

Publicity Code
of the
Massachusetts Medical Society

PREAMBLE. Believing that the relationship between organized medicine as represented in this Commonwealth by the Massachusetts Medical Society and the public as represented by the press, the radio, non-medical magazines and other similar media of communication should be cordial, co-operative and more closely integrated than it has been in the past, the Council of the Massachusetts Medical Society acting for the Society in a regular meeting hereby authorizes the following Publicity Code to implement such relationship:

1. This document shall be known as the Publicity Code of the Massachusetts Medical Society.

2. The purpose of this code is to establish acceptable ethical limits within which Fellows of the Society who are also members of hospital staffs or of administrative departments of hospitals or other institutions devoted exclusively to the teaching, investigation or practice of medicine may contribute in writing or by interview to the non-medical press and magazines or the radio or other media of communication.

3. This code shall be supplemental to the present codes of ethics that govern the Fellows of the Massachusetts Medical Society.

4. The name of any Fellow of the Massachusetts Medical Society as designated in Section 2 of this code may be used for purposes of publicity only with permission of the Chief of Staff or the Chief of the appropriate service of the hospital and of the hospital director. This permission applies only provided that the Fellow is identified as a member of the staff rather than as an individual and where the emphasis is on the services rendered and not on the individual Fellow.

5. If the hospital organization does not include a Chief of Staff or Chief of Service, the name of any Fellow may be used for purposes of publicity as otherwise limited in Sections 2 and 4 of this code only after permission has been obtained from the Supervising Censor of the District Society of which the Fellow in question is a member. Permission from the hospital director will not suffice in these circumstances.

6. In the case of institutions other than hospitals, devoted exclusively to the teaching, investigation and practice of medicine, the name of any Fellow may be used for purposes of publicity only as follows: A. With permission of the head of a major department or research organization. B. With permission of the Dean of a Medical School or someone specifically designated by him for this purpose. These permissions apply only if the emphasis is placed on the services rendered or work done rather than on the individual Fellow.

7. The name of any Fellow may be used in connection with an individual case or project with the consent of the individual Fellow and in accordance with the requirements listed in Sections 4, 5 and 6 of this code. This permission applies only whenever the case or project illustrates the work performed at the hospital or the institution (see Sections 4, 5 and 6 of this code) and the emphasis is placed on the services rendered or work done and not on the individual Fellow.

8. The name of any Fellow may be used in information given out about a patient or a project in conformity with the requirements listed above in Sections 4, 5 and 6 of this code whenever the press, magazines, radio and other media of communication have most of the facts already and are calling the hospital or institution for purposes of verification of data received from other sources.

9. Fellows of the Massachusetts Medical Society as described in Section 2 of this code who are contacted directly by representatives of the press, magazines, radio or other media of communication and who are unwilling to conform to the requirements as laid down in Sections 4, 5, 6, 7 and 8 of this code must consider themselves responsible for the contents of said interviews regardless of their alleged accuracy or inaccuracy.

10. Except as specified in Section 9 of this code Fellows of the Massachusetts Medical Society as described in Section 2 of this code, the use of whose name by the press, magazines, radio or other media of communication has not been specifically authorized in accordance with the provisions of Sections 4, 5, 6, 7 and 8 of this code shall after investigation by the proper authorities be held absolved of all blame for such authorized use regardless of the accuracy or inaccuracy of the article or interview in question.

11. It is recommended that Fellows of the Massachusetts Medical Society who are forced to respond to inquiries from the press, magazines, radio or other media of communication without an opportunity to invoke the provisions listed in Sections 4, 5, 6, 7 and 8 of this code limit their reply to the single statement, "No Comment."

12. Violations of this Publicity Code by Fellows of the Massachusetts Medical Society shall be subject to review by the Committee on Ethics and Discipline of the Massachusetts Medical Society. The Committee on Ethics and Discipline may initiate action for this purpose or may take action in response to written complaints relative to infractions of this code provided the complaint is signed by the complainant. The decisions of the Committee on Ethics and Discipline shall be rendered in accordance with Chapter VII, Section 9 of the By-Laws of the Massachusetts Medical Society.

B. Your committee is strongly of the opinion that the scope of this code should be widened and its influence extended. To accomplish these ends it is desirable that governing Boards of Hospitals, hospital directors, authoritative representatives of the press, of the non-medical magazines, of the radio and of other similar media of public communication be informed of this desire as coming from the Massachusetts Medical Society as well as the Society's willingness to co-operate with these agencies to that end.

Your Committee therefore *recommends* that it be continued in existence for this purpose.

C. Your Committee *further recommends* that this code be included with the By-Laws and Code of Ethics presently in preparation for publication and distribution to the Fellows of the Massachusetts Medical Society.

Ralph R. Stratton, M.D.
John F. Conlin, M.D.
Charles C. Lund, M.D.
Leroy A. Schall, M.D.
Donald Munro, M.D., *Chairman*

APPENDIX NO. 19

Report of the Meeting of the House of Delegates of American Medical Association

The attendance at the meeting of the American Medical Association in Atlantic City was the second largest of the 87 previous sessions. The technical and scientific exhibits were crowded all the time and the color television of actual operations performed by nationally known surgeons at the nearby Atlantic City Hospital evoked unusual interest.

The House of Delegates met on the morning of the 6th at the Traymore Hotel and continued in session until the 9th. There was the usual high percentage of attendance and considerable business was accomplished. Your delegates were all present and were given the following reference committee appointments:

Dr. McKittrick — chairman Emergency Medical Service
Dr. Phippen — member — Legislation and Public Relations
Dr. Kickham — member — Reports of Officers
Dr. Curley — Corps of Sergeant-at-Arms.

Dr. Phippen also served on the committee to nominate candidates for the Distinguished Service Award and on the

so-called Hess Committee on Practice of Medicine by Hospitals.

The Distinguished Service Award was given to Dr. Seal Harris, of Alabama, by vote of the House of Delegates.

The highlight of the first morning session was the announcement by the chairman of the Board of Trustees of the curtailment of Dr. Fishbein's activities. This is old news now, but as a matter of fact it did not occasion quite the stir that the newspapers would have you to believe. Nearly everyone expected something of the kind would happen. Every member of the House appreciates Dr. Fishbein's ability and capacity for work and realizes what he has accomplished with the *Journal*. I think most of them felt very sorry but realized that it was a move in the best interests of all the members of the American Medical Association. He will actually retire when the reorganization of the editorial office has been accomplished and his successors trained for the jobs. (I believe there will be four).

The Committee on Emergency Medical Service reported that the status of the Surgeon General of the Army had been much improved. He now has supreme authority in the Army Medical Department reporting directly to the Chief of Staff and not through the Adjutant General's office as heretofore. It also announced the establishment of a Division of Medical Service in the office of the Secretary of Defense and that the first Director of Medical Services of the armed services had been appointed. This should bring about more co-operation between the Medical Corps of the Army, Navy and Air.

The House approved a resolution from the Section of Anesthesiology recommending the trustees to provide funds for a study of operating-room deaths.

The House adopted the recommendation of the Council on Medical Service as follows:

The formation of a national co-ordinating agency representing all qualified voluntary prepayment plans in accordance with the proposal made to the Board of Trustees by the Council on Medical Service; that there shall be no official connection between the American Medical Association and the Associated Medical Care Plans; however, the American Medical Association will continue to approve or disapprove all voluntary medical-care plans; the recognition of A.M.C.P. as a trade organization of member plans and Blue Cross as occupying a similar position for voluntary prepayment hospital care plans; the recognition of the responsibility of the American Medical Association to promote the principle of voluntary insurance by educating the people as to their need for such coverage and by obtaining full co-operation from state and county medical organizations in the local field and to inform the American people of the availability of approved plans that propose to supply on a prepayment basis security against the economic hazards of serious illness.

The House approved a report of the Council of Medical Service setting forth 20 principles as guides for approving lay-operated medical-care plans. This is a progressive step since there are already 171 lay-operated or consumer-sponsored plans in 43 states. There are now 95 sponsored by medical societies.

The House approved sponsorship of a national health conference to encourage discussion of the American Medical Association twelve-point program by farm, labor and other lay organizations.

A resolution was introduced aimed to limit the care of nonservice-connected disability by the Veterans Administration, and to limit the hospital-building program of the Veterans Administration. This was reported favorably by the reference committee but was rejected by the House. It was later reconsidered and after considerable discussion was referred to the Board of Trustees for further consideration.

The House adopted a resolution creating a special committee composed of members of the Board of Trustees, House of Delegates and other fellows of the Association to arrange a conference with members of Congress with a view of developing legislation that would meet the objectives of the American Medical Association program in its effort to solve the problem of making medical care more readily accessible to the American people. This committee would work in co-ooperation with other existing committees and make its report from time to time to the Board of Trustees.

The Committee on Hospitals and the Practice of Medicine defined the corporate practice of medicine and gave a summary of the laws covering the practice of medicine in all states. It reiterated the fact that neither hospital nor doctor should be exploited at the expense of the other. It urged that all specialists should be regularly appointed members of the medical staff with a voice in its management. It concluded that most controversies should be settled at the local level and suggested that every component society appoint a committee on hospitals and professional relations.

The reference committee in recommending the adoption of this report further reminded the delegates that the Judicial Council had jurisdiction in such matters and might, if the evidence warranted, find either the hospital or lay group guilty of violating the Principles of Ethics and recommend that the Judicial Council withdraw the Association's approval of a hospital that did not comply.

The House approved the following resolution: that the House of Delegates of the American Medical Association express its disapproval of the extension of so-called "social security" to self-employed persons, including physicians and surgeons. This resolution has now been mailed to all state secretaries, urging them to interest their members in opposing this legislation.

Much other business was transacted, and the House accomplished a good deal of work in a short time.

WALTER G. PHIPPEN, M.D.

APPENDIX NO. 20

REPORT OF THE ADVISORY COMMITTEE FOR RED CROSS BLOOD BANK

On July 20, 1949, the Committee met to consider various problems in connection with blood collection and distribution. The entire committee was present except for Dr. Joseph Ross, who was unable to attend. Because we felt that the success of our work would depend on a very close relation with the Red Cross, and that no help that we might be able to give the Red Cross would be valuable unless they both understood and desired it, we invited Dr. William Freeman, of Fall River, the state medical director of the Red Cross program, to attend. He came to the meeting and gave us a considerable amount of help.

It was the feeling of the Committee that we should first decide whether we considered the Red Cross program to be valuable to both patients and the medical profession of the State. We discussed this matter at some length and came to the conclusion that it was indeed valuable. We have all served in an advisory capacity to the Red Cross — Dr. Brown in Northampton, and the rest of us in the metropolitan area. We have therefore been cognizant of the fact that the present program of blood collection and distribution was more or less forced upon the Red Cross in March, 1948, when funds were no longer forthcoming from the State for the maintenance of the blood program. This has meant, of course, that the support of the medical profession has been vital for the Red Cross to carry on with the program, which, although still in its infancy and small, was already valuable.

The fundamental purpose behind the National Red Cross Blood Program has been twofold — namely, the setting up of a program, which, in the event of local or nation-wide catastrophe, would be able to supply blood throughout the country, and, at the same time, to make blood available to all who need it in hospitals everywhere without charge for the product. Whether or not the Red Cross is the logical agency for setting up a nation-wide program we did not feel to be a matter for our consideration, since such a program has already been set up at the instigation of and with the sanction of the federal Government.

Blood for all, without the necessity for establishing credit or making repayment, is extremely worthy on an idealistic basis. All of us, however, have had considerable experience with the collection of blood in our own hospitals. Some of us are not thoroughly convinced that a sufficiently high level of public enthusiasm can be permanently maintained in the absence of a national catastrophe to ensure a steady supply of the amount of blood necessary to meet hospital needs.

In further considering the method of collection, two points are important: that the Red Cross method of voluntary free donation is still new and in a trial period that will probably have to go on for months or even several years before we can logically determine whether it will be a success or failure; and to be successful, it must have the full active support of the medical profession, any action short of which might cripple the program, which would be unfortunate, as well as rendering us somewhat to blame. We discussed a number of minor difficulties with the program, most of which we felt could be ironed out at the Red Cross advisory meetings, since any public recommendations made to correct them might contribute to shaking public confidence in the program as a whole. The essential difficulty of the Red Cross Program is an insufficient number of donors. When it can collect enough blood, most present problems will solve themselves.

The Committee recommends that the Society give both verbal and active assistance to ensure the success of the Red Cross State Blood Program, because its success will be a great boon to patients and to physicians alike.

It further recommends the following specific measures to assist the program:

That the editorial board of the *Journal* should from time to time write editorials expressing approval of the Red Cross program and explaining the purpose, its value to patients and to doctors, and explaining what doctors can do locally to help — it should stress the following points: the value of blood and blood derivatives without payment for the product; the fact that hospitals and doctors will not lose money by handling this blood, since reasonable charges for laboratory work administration will continue as before; that local blood banks will be encouraged to exist and will probably flourish under this system; that the establishment of local storage depots by the Red Cross at strategic sites in the State has already begun and will probably be expanded; that the supplying of blood by the Red Cross to the small hospitals where the use of blood is sporadic but vital has already been of great value and will be expanded; that all doctors should realize the value of the program to themselves and should take an active part in their local Red Cross program to ensure that collections be at a high level and distribution on the best possible basis for their needs, the whole success of the program resting on large collections (this they can do by joining the blood program committee of their local chapters, setting an example in their communities by their own, or family donation of blood to the Red Cross, serving as speakers for their Red Cross chapters, discussing with their local chapters, or the directors of the program, any problems that arise in their use of blood, informing their patients or their families when they have received blood or albumin or gamma globulin from the Red Cross and encouraging them to replace it, and setting up in co-operation with the Red Cross a program for distribution from one hospital to another in case of need).

That the Red Cross should expedite its collection of blood in the metropolitan area by establishment of a donor center in Boston.

That the Committee be authorized to write to hospitals and district medical societies to find out how the blood program is working locally and on the basis of its findings make recommendations to the Red Cross through the Red Cross Advisory Committee, several members of which serve on this committee.

That the Red Cross should extend its advertising and publicity campaigns to obtain a better response from the public.

That one of the really great problems in this state at present is the inadequate technical training of many of the persons responsible for grouping and cross matching — a problem beyond the scope of the activities of the Red Cross, but one that this committee should solve; a subcommittee made up of Dr. William Moloney and Dr. F. H. Allen investigated the matter and on the basis of their studies this committee submits the following recommendations for the improvement of the situation: that it should be brought to the attention of district medical societies and hospital directors by the Executive Committee of the Massachusetts Medical Society that the correct grouping and cross-matching of patients before transfusion remains the legal responsibility of the doctor administering the blood and of the hospital in which the transfusion is given, that in some instances this is now being done by ill trained personnel, which can cause serious mistakes (according to a survey made by Dr. McReady of the State Biological Laboratory there are a number of hospitals in which the grouping and cross-matchings are done by untrained persons), that this can be remedied by training the persons conducting the grouping and cross-matchings, that this training can be carried out at the State Blood Grouping Laboratory free of charge, and by the larger blood banks — the members of this committee who represent blood banks have expressed their willingness to do this — when the Red Cross blood laboratory is opened it will be able to participate in a training program and that current work on new and better technics is so encouraging that we should wait another three to six months for their development before initiating such a training program.

F. Harold Allen, Jr., M.D.
Stephen Brown, M.D.
Charles Emerson, M.D.
Harold B. Kenton
William C. Moloney, M.D.
Joseph F. Ross, M.D.
Lamar Soutter, M.D., *Chairman*

APPENDIX NO. 21

Report of the Committee on Blue Cross–Blue Shield Problems

A meeting of the Committee was held on July 29, 1949, at 8 Fenway. The Blue Shield program of payments for the care of ward cases in teaching hospitals was discussed. Representatives of the Massachusetts General Hospital, Childrens' Hospital and Massachusetts Eye and Ear Infirmary, Boston Floating Hospital and Blue Shield were present. The hospitals had been informed that payments had not been made to doctors caring for Blue Shield patients on the wards. The hospitals had replied that it was not the policy in their institution to consider ward patients as private patients and to place them in that category would injure the teaching program.

Blue Shield suggested that staff doctors form groups to receive Blue Shield fees and to disburse the money as they saw fit.* One hospital representative stated that the group in his hospital had employed the money collected for laboratory research, intern travel expenses, postgraduate education and so forth.

It was the opinion of the Committee that teaching facilities in these hospitals must be maintained, and that Blue Shield fees for the care of these patients when requested by a particular hospital staff be paid to doctors or a group of doctors and not to a hospital, and that when paid the monies may be used for any purposes decided by a vote of the doctors concerned.

The House of Delegates of the American Medical Association meeting at Atlantic City in June, 1949, dissolved all formal relations existing between the American Medical Association and Associated Medical Care Plans, the national association of Blue Shield plans. In effect this action means that the Council on Medical Service of the American Medical Association will no longer be represented on the Blue Shield Commission, which is the governing board of A.M.C.P., and that the implied objection of the American Medical Association to the formation of a Blue Shield insurance company better to serve national accounts has been removed.

The Blue Shield Commission has already taken preliminary steps to establish a national insurance company and is only awaiting approval by a majority of plans before bringing

*The Council amended this report by deleting the lines beginning with the word "The" in the third sentence of the first paragraph and ending with the word "fit" in the second paragraph, and substituting the following: "It was pointed out that until about a year ago Blue Shield made no payments for medical services rendered to ward service cases, because it was the confirmed policy of the hospitals involved that staff physicians should not bill for such services. During 1948 this policy on the part of several teaching hospitals was altered to the extent that staff groups, but not individual physicians, were permitted to receive payments from third parties, such as Blue Shield and commercial insurance companies, for medical services rendered to service ward patients. Formal group arrangements were made at two hospitals, and informal group arrangements were made at several other hospitals, after which Blue Shield began making payment to these groups."

the matter to a conclusion. The Board of Directors of Massachusetts Medical Service has voted its approval. The Blue Cross national insurance company is well on its way to completion. Sufficient capital funds have been raised and assurance of favorable action by the Illinois Commissioner of Insurance has been received.

The recent expansion (September 1, 1949) of the Blue Shield program to include nongroup enrollment was a significant step in the right direction. A previous effort in this regard, undertaken in June, 1947, was nullified by concurrent difficulties in which Blue Cross found itself.

Revision of the Blue Shield subscriber certificate (effective September 1, 1949) should go a long way toward clarifying administrative details. The provision that a member who uses private accommodations when such accommodations are not medically necessary is automatically classed as over-income will require judicious application by the medical profession.

Much dissatisfaction is reported by physicians with the restrictions and limitations on "existing" and congenital conditions in the Blue Cross subscriber contract. It also appears that patients are being forced to accept ward service because they are unable to pay the difference between the board and room rate at the hospital and the $7.00 credit allowed by Blue Cross. This is also true of the differential between the $70.00 provided by Blue Cross for maternity care and the hospitals' charges for this service. It is anticipated that the Society representatives on the Blue Cross Board of Directors will give these matters their serious attention.

Many requests that they be permitted to enroll themselves and their families in Blue Shield are being received from physicians. *It is recommended that this matter again be referred to the appropriate committee for consideration.*

PAUL M. BUTTERFIELD, M.D.
JOHN FALLON, M.D.
HARVEY A. KELLY, M.D.
JOSEPH C. MERRIAM, M.D.
CHARLES J. E. KICKHAM, M.D.

APPENDIX NO. 22

REPORT OF THE ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Committee is happy to report that 12 of the 18 district auxiliaries are now organized and that over 1000 ladies are now active members.

The Auxiliary has already more than fulfilled the high hopes that were held for it. The ladies have shown excellent interest and have participated capably and enthusiastically in furthering the efforts of the Society.

Much has been accomplished on the suggested sixteen-point program for the Auxiliary outlined by the Committee in October, 1948, and presented to the Council at its February meeting.

Additional fields of activity have been reviewed and are offered to the Auxiliary for consideration and such action as may be indicated:

Continued efforts toward maximum enrollment in numbers of district auxiliaries and in individual memberships.

Co-operation with the phase of the National Education Campaign of the American Medical Association that pertains to the Auxiliary. Such activities may well include: the training of speakers and arranging for their appearance before various women's groups; passage of appropriate resolutions by each of the district auxiliaries opposing the Administration's compulsory national tax sickness program, arranging for framing of colored reproduction of Sir Luke Fildes' picture "The Doctor" for display in physicians offices; and distribution of national education campaign literature.

Sponsorship of "Career Days" in high schools throughout the state. Contact with school committees and school superintendents and principals should urge the value of presentation of the background of various trades and professions to high-school students about to seek employment or who intend to continue their education. Such programs indirectly aid the medical, nursing and other health professions by attracting the most competent and suitable candidates.

Co-operation with medical and Surgical Relief Committee, Incorporated, in the collection of medical and surgical supplies for overseas hospitals and institutions that give free medical aid to the needy.

The Committee wishes to congratulate the officers and members of the Auxiliary for the excellent results they have accomplished. Under the presidency of Mrs. Leighton F. Johnson of Norfolk much progress was made in the first year. The annual meeting of the Auxiliary in Worcester in May was a distinct success.

To Mrs. Charles E. Ayers, of Worcester, and to her fellow officers for 1949–50 we wish every success in the continued growth and development of this valuable adjunct to the Society. The continued enthusiasm and active co-operation of the Auxiliary members are urgently needed.

DAVID L. BELDING, M.D.
MILTON J. QUINN, M.D.
JOHN F. CONLIN, M.D., *Chairman*

CASE RECORDS OF THE MASSACHUSETTS GENERAL HOSPITAL

Weekly Clinicopathological Exercises

FOUNDED BY RICHARD C. CABOT

TRACY B. MALLORY, M.D., *Editor*

BENJAMIN CASTLEMAN, M.D., *Associate Editor*

EDITH E. PARRIS, *Assistant Editor*

CASE 35491

PRESENTATION OF CASE

A fifty-nine-year-old retired insurance salesman was brought to the hospital in a state of confusion and disorientation.

He had always been well until five months before admission, when on waking one morning, he was found to be confused and unable to recognize his wife. He had a thick, slurred speech and shortly afterward, during examination by a physician, he suddenly had a convulsive seizure. This began with a turning of the eyes upward and, it was thought, to the left and a drawing up of the left corner of the mouth, followed by clonic movements of both arms and legs, lasting two or three minutes. Three similar convulsions occurred in rapid succession. There was no incontinence and no biting of the tongue. After fourteen hours of unconsciousness the patient improved and was left with some thickness of speech and weakness of the extremities. He recalled a "snapping" feeling in the left frontal region the night before the onset of symptoms. There had been no headache. A month later he seemed to be in "perfect health." One month before admission he was again confused for a few minutes. During the next week he became "weaker" and complained of a sharp, constant pain across the low lumbar region, which increased on coughing or sitting down but felt better on walking or lying. Ten days before admission, there was progressive weakness of the legs and eventually inability to walk. No numbness or paresthesia had been observed. He developed increasing constipation and a feeling of urgency and difficulty in voiding. Six days before admission his speech again became thick, and at times he was irrational. He developed a "rapid clonic tremor" of both hands and twisted and pulled at the bedclothes. He occasionally complained of diplopia, of pains and headache in the right frontal region and "tingling" in the nose. Two days before admission he changed markedly for the worse, becoming excitable, voluble and completely confused. He had lost 15 pounds in the previous four months.

The past history was irrelevant except for occasional frontal headaches and a morning cough for the past five or six years. Recently he had taken one "phenobarb" and one or two "bromides" a day. Previous to his illness, nothing abnormal had been found at bi-annual insurance examinations.

Physical examination revealed a confused, disoriented, slightly euphoric man in no acute discomfort. There was incontinence of urine. A scaling erythematous eruption was seen over the face, chest and arms. There was a purulent nasal discharge, and the tongue was red and smooth. The heart sounds were slapping and of poor quality. The lungs and abdomen were normal. The neck and spine were rigid. There was well localized tenderness and bilaterally radiating pain on pressure over about the seventh thoracic vertebra. Midthoracic pain was also brought on by coughing. The cranial nerves were normal. Speech was slurred, rapid and indistinct, with some groping for words. There was slight weakness in the arms and scarcely any strength in the legs. The weakness was more marked on the right side. Pain sensibility was diminished over the legs and lower abdomen, but a definite level could not be made out. Vibration was felt over the malleoli. The tendon reflexes were difficult to obtain or were absent, and the findings of the different examiners did not agree in all respects. There was no agreement about the comparative activity of the arm jerks. Knee jerks were thought to be more active on the left. The ankle jerks, the abdominal reflexes and the plantar reflexes were absent, and on one occasion there was an equivocal extension reflex on the left. The pupils were equal and reacted normally on admission, but later the left was somewhat larger than the right. There was slight blurring of the nasal margins of the optic disks, thought to be not definitely abnormal. Confrontation fields were normal.

The temperature was 99.6°F., the pulse 85, and the respirations 84. The blood pressure was 140 systolic, 90 diastolic.

The red-cell count was 4,300,000, and the white-cell count 1500, with 78 per cent neutrophils. The bromide was 6.6 milliequiv., and the chloride 103.0 milliequiv. per liter. The acid phosphatase was 1.9 units. A blood Hinton test was negative. The urine was normal. An electroencephalogram was diffusely abnormal. The initial spinal-fluid pressure was equivalent to 98 mm. of water, with normal dynamics. The fluid was xanthochromic, clotted rapidly and contained 2 lymphocytes and 140 red cells per cubic millimeter. The total protein was 282 mg., the sugar 61 mg., and the chloride 641 mg.

per 100 cc. The gold-sol curve was 0145555555. The Wassermann reaction was negative.

X-ray films of the skull showed slight displacement of the pineal shadow toward the right. A chest film was normal, except for minor degenerative changes in the spine.

Six days after the lumbar puncture, combined cistern and lumbar punctures gave the following results: cistern, initial pressure 210, jugular compression 350, release 250, xanthochromia +, lymphocytes 1, and protein 192 mg.; lumbar, initial pressure 210, jugular compression 350, release 250, xanthochromia ++, lymphocytes 5, and protein 402 mg.

The patient's course in the hospital was steadily downhill. Four days after admission the temperature rose to 101.5°F., and rales appeared in the right axilla. Penicillin and sulfadiazine were of no avail. Voiding became progressively more difficult, and a Foley catheter was inserted. On the eighth hospital day a skull trephination was performed. Three days later another chest x-ray film showed patchy areas of increased density over both lower-lung fields. The patient became flushed, dyspneic and lapsed into deep coma. He died on the fourteenth hospital day.

Differential Diagnosis

Dr. Robert Schwab*: The left-sided seizure began with twitching on the left side of the face, which was said to have been observed by a local physician. It might have been an error in observation. It is difficult in a case of early seizure to be sure whether it involved the left or right side. The left-sided seizure does not fit in with the neurologic findings. It would seem from the original examination that this convulsion would if anything be a right-sided affair with aphasia. Dr. Cole assures me that I have a four-to-one chance that this patient was right-handed and therefore that the lesion was in the left frontal area. That is where he had the snapping sensation, and the right side was weak. It is much more reasonable to suppose that the original seizure began on the right side of the face and became generalized.

The spinal-fluid findings and the laboratory findings are worth consideration at this point. I should like to ask Dr. Kubik about this because it is an important point in the differential diagnosis. Is this a red herring or a misprint that there was a white-cell count of 1500?

Dr. Charles S. Kubik: The white-cell count was 15,000.

Dr. Schwab: We have a striking abnormality in the spinal fluid in that the protein was increased to 282 mg. per 100 cc. On the first examination the pressure was said to be normal, and the fluid clotted rapidly, with normal sugar and no increase in cells, except a few red cells, which may have been the result of trauma. The chlorides were down slightly, and I believe that could be explained by the increase in protein. The normal sugar is evidence against infection in the meninges. The gold-sol curve is a meningitic one, which is found in marked increase in albumin content as opposed to globulin. The blood Hinton and spinal-fluid Wassermann reactions were negative.

The second factor we will discuss along with the first one is the combined puncture in the lumbar and cisternal regions. The marked increase in protein in the lumbar space over the cistern indicates a slight chemical block, but there was no evidence of dynamic block. Again, no evidence of infection was noted, as indicated by the absence of white cells in the fluid. The neurologic findings were absent knee jerks, slight weakness of the right side and slight papilledema, which is a further check of the protein of 282 mg. per 100 cc. During the second puncture, he complained of diplopia, and the x-ray films showed the pineal body shifted to the right.

Dr. Reginald Lingley: As far as I can see, the films show only a displacement of the pineal body toward the right side. There is no evidence of chronic pressure, and the sella turcica is normal.

Dr. Schwab: This is a very important sign, particularly with a good anteroposterior film such as this, and it indicates a space-occupying lesion in the left side of the cranium that would be consistent with right-sided weakness, the onset of convulsions on the right side, and the complaint of headache in the left frontal region. We must not forget that this patient complained for some time (five months or so) of loss of weight, increasing constipation and pain in the back. Also, at entry he had tenderness in the back in the same area. That is impossible to correlate with a single lesion in the left frontal region. So it seems to me that we have to start out by supposing we have two lesions: a lesion in the spinal canal of some sort and a lesion in the left frontal area, perhaps of the same nature. The most obvious etiology of the two lesions or multiple lesions is neoplasm. I was seriously led by what I thought was a leukopenia to the consideration of a blood-cell tumor such as leukemia. Hodgkin's disease sometimes invades the nervous system, causing lesions, so that the patient complains of central-nervous-system symptoms rather than generalized ones, and at autopsy one may find evidence of leukemia or Hodgkin's disease infiltrating the meninges. But with the leukopenia removed, I am not so certain that that consideration is tenable. A white-cell count of 15,000 would be reasonable for anyone admitted with chronic cough and some loss of weight. One would suppose that there was involvement of the meninges around the spinal cord, giving a loss of ankle jerks, weakness of the legs and tenderness in the spine. The other lesion in the frontal area, causing the original epileptic seizure

*Associate neurologist, Massachusetts General Hospital.

and the stupor, could possibly produce intracranial pressure.

Again coming to the consideration of the most plausible causes for lesions in two places, the commonest are tumors of the brain that are metastatic. Lung tumors have a high incidence of brain and spinal-cord involvement. This man had both loss of weight and chronic cough preceding entry. The presence of a smooth, red tongue and chronic infection might go with any debilitating illness and fit in with a carcinomatous condition if that were causing the two lesions of the central nervous system. I do not believe it likely at his age that he had multiple hemangiomas; they could cause a high spinal-fluid protein and could occur in more than one place. My first bet would be that it was a metastatic tumor, and my second one, a primary intracranial neoplasm that had spread directly down the spinal cord, down the meninges or with its own metastases. The third possibility is a blood-forming tumor such as leukemia or Hodgkin's disease, but we have no evidence for such a lesion. The condition was rapidly growing, in a man who was in reasonably good health three months before he came to the hospital. Before death he failed to respond to trephination and other exploratory measures in the hospital. My impression is that he had metastatic cancer in the brain and spinal cord.

Dr. Augustus S. Rose: What is the explanation for the stiff neck?

Dr. Schwab: Involvement of the meninges in the spinal canal with neoplasm.

Dr. James C. White: One type of tumor in a man of this age that would give these symptoms is medulloblastoma.

Clinical Diagnosis

Encephalitis?
Bronchopneumonia.

Dr. Schwab's Diagnosis

Metastatic tumor in brain, left frontal region, and in spinal cord.

Anatomical Diagnoses

Glioblastoma multiforme of left temporal lobe, with metastases to spinal cord and spinal nerves.
Bronchopneumonia.

Pathological Discussion

Dr. Kubik: I believe that Dr. Schwab's diagnosis is by far the most logical one. Multiple tumors of the central nervous system usually mean metastases, symptoms of which not infrequently appear before any prominent symptoms of a primary tumor have been noted. That is particularly true of bronchiogenic carcinoma.

This, however, was not carcinoma but another condition, which Dr. Schwab also mentioned as a possibility — that is, a glioma with "metastases" or implantations, which were disseminated through the subarachnoid space. Although this is not too uncommon in cerebellar medulloblastoma, it occurs quite infrequently with glioma of the cerebral hemispheres and is almost never diagnosed except when it is discovered at post-mortem examination.

The primary tumor, measuring approximately 6 cm. in diameter, was situated in the left temporal lobe (Fig. 1) below the Sylvian fissure, which was displaced upward. It invaded the inferior part of the lenticular nucleus, and, in the region of the hippocampus, it extended to the medial surface of the temporal lobe, where it broke through the pia and

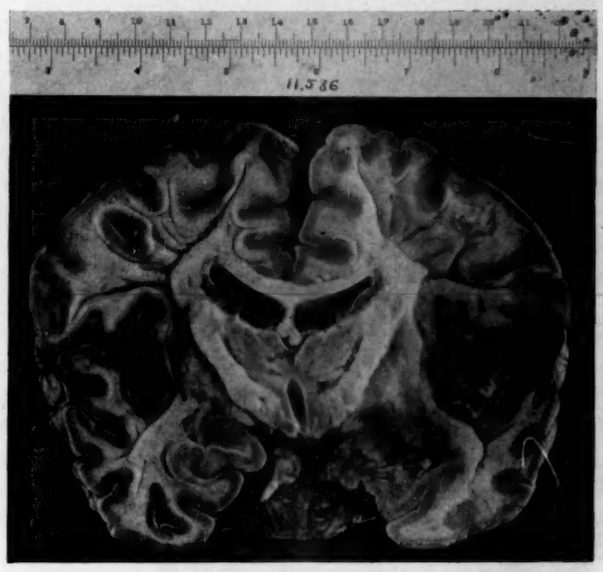

Figure 1. *Glioblastoma Multiforme, Left Temporal Lobe.*

invaded the subarachnoid space. It was from here, presumably, that tumor cells floated through the spinal fluid to seed themselves in distant parts of the subarachnoid space.

There was one, measuring approximately 1 cm. in diameter, on the dorsal surface of the spinal cord in the midthoracic region, and another, 1.3 by 0.8 by 0.2 cm., on the ventral surface in the upper lumbar region (Fig. 2). These were the largest nodules; there were a number of smaller ones, including several on the roots of the cauda equina (Fig. 2).

The tumor invaded the left third cranial nerve, thus explaining the enlargement of the left pupil.

There were two nodules, the larger one measuring 0.8 cm. in diameter, on the surface of the right cerebellar hemisphere, and several on the spinal cord and spinal nerves.

There were no metastases to any other organs.

The primary tumor and implanted nodules were indistinguishable from each other in histologic appearance. Both were composed largely of slender

and plump fusiform cells with slender, elongated and broader, oval nuclei, which varied considerably in size. There were many multinucleated forms, a fair number of mitoses and numerous foci of necrosis. Connective-tissue and reticular stains revealed no stroma outside the blood vessels. The nodules

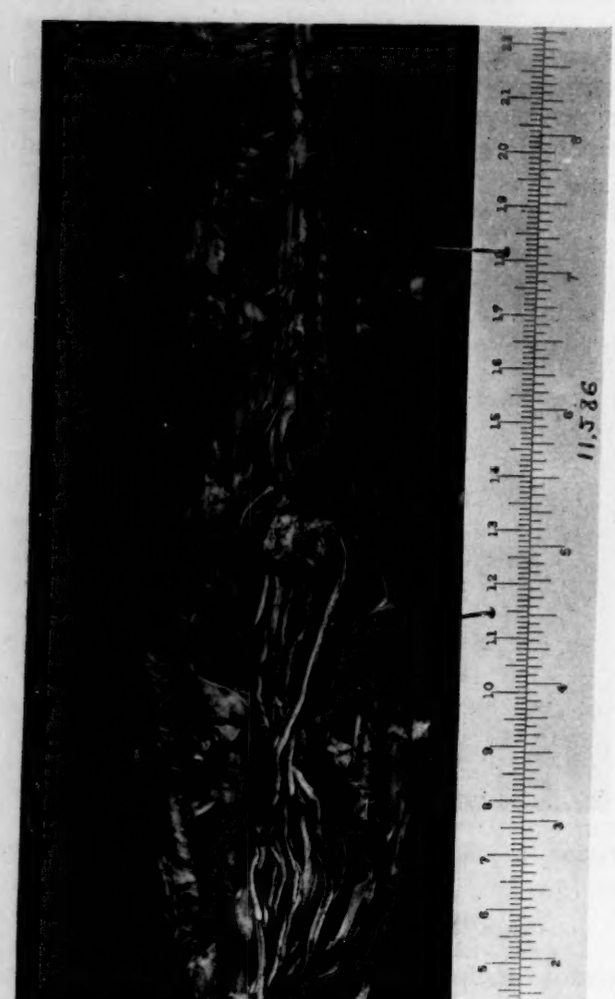

FIGURE 2. *Metastatic Nodules on the Spinal Cord and Spinal Nerves.*

invaded the underlying spinal cord and adjacent spinal nerves and arachnoid membrane. In some places there was diffuse infiltration of the subarachnoid space by tumor cells without nodule formation.

The tumor was clearly a glioma, which I should classify as glioblastoma multiforme.

CASE 35492

PRESENTATION OF CASE

A fifty-nine-year-old man was admitted to the hospital complaining of repeated hematemesis during the preceding twenty-four hours.

About five years before admission the patient began to have two-day to three-day periods of "indigestion" characterized by sharp epigastric pain, bloating and sour eructations coming on two or three hours after a meal, relieved by soda but not by food. The day before admission he noted the sudden onset of warmth, sweating and weakness, and he vomited about a liter of dark blood and clots without any pain or nausea. He was given a hypodermic injection by a physician and remained in bed for the rest of the day without any further symptoms. On the day of admission at about 4:45 a.m., he was awakened with a second hematemesis and shortly afterward passed a large, tarry stool. At 6:00 a.m. and again at 9:00 a.m. he also vomited blood, and arrived at the hospital in moderate shock.

The past and family histories were noncontributory.

Physical examination showed a well developed, moderately well nourished man. The skin was pale, cold and clammy. The abdomen was soft, with an ill defined, nontender mass, 6 by 8 cm., in the right upper quadrant.

The temperature was 100.6°F., the pulse 94, and the respirations 22. The blood pressure was 88 systolic, 68 diastolic.

The urine was normal. The hemoglobin was 8.5 gm. per 100 cc. The prothrombin time was 57 per cent of normal. The nonprotein nitrogen was 78 mg., and the total protein 5.2 gm. per 100 cc. A limited gastrointestinal series on the third hospital day showed no evidence of esophageal varices or tumor, but revealed widened gastric folds, an inconstant duodenal deformity and a questionable crater.

The patient received 2500 cc. of blood on the first hospital day, with a rise in hemoglobin to 11.5 gm. Transfusions of 500 cc. per day were continued, but he remained weak and hypotensive. Therefore, on the sixth hospital day, after preparation with Hykinone and further transfusion, a subtotal gastrectomy was performed. Pathological examination of the specimen showed only mild chronic gastritis. The patient did well until the second postoperative day, when he began to vomit small amounts of blood, and blood was noted in the gastric drainage tube. This persisted until the sixth postoperative day, when there was massive hematemesis of 2400 cc. with resultant hypotension and incipient shock. Following this he was re-explored.

DIFFERENTIAL DIAGNOSIS

DR. PERRY CULVER*: We are presented here with the problem of the differential diagnosis of upper-gastrointestinal-tract hemorrhage that was sufficient to put a man into shock. The age is that of a person who could have cancer, ulcer, gastritis,

*Assistant in medicine, Massachusetts General Hospital.

varices or anything else, so I do not think the age is going to help to any extent.

The five-year story of indigestion is a vague one. This symptom could have been due to ulcer, and the epigastric pain would also be in keeping with such a diagnosis. Ulcer would also explain the bleeding and sour eructations. It is unusual for food not to relieve ulcer pain, but it does not always do so in every case. I think that fact is of importance in this case, however. The nebulous diagnosis of gastritis is one that continually pops up in a situation like this. There is a great deal of argument about whether gastritis may cause symptoms. Enthusiasm for this diagnosis waxes and wanes. At times people have had the impression that symptoms of gastritis were not due to gastritis but to some underlying condition. On the other hand, we have seen cases of gastritis sufficiently severe to cause profuse bleeding without any symptoms whatsoever. The textbooks will tell one that the symptoms of gastritis are those of peptic ulcer except that food does not relieve gastritis. If one wishes to accept textbook experience, gastritis fits this case perfectly — ulcer pain not relieved by food. That is a rather weak nail to hang one's hat on, but I mention it in passing.

It is of interest to speculate upon what part of the symptoms may be attributed to a nervous stomach, but it is unusual for nervous-stomach symptoms, whatever they are, to appear at this age. They occur usually in much younger persons. I think this patient had an organic disease. A nervous stomach does not cause hemorrhage. It is a little unusual for cancer of the stomach to bleed so massively, and the history of a five-year period of indigestion would make me less likely to favor cancer.

These are the main diseases that I can think of that might cause both symptoms of this nature and hemorrhage. I will take up other causes of hemorrhage when we come to the x-ray studies.

The history, subsequently, was that of massive hemorrhage with shock. No further comment is needed on that. I would like to know one thing about the past history — that is, whether there was any history of alcohol intake.

Dr. Tracy B. Mallory: I remember seeing a statement that the patient was a moderate drinker.

Dr. Culver: That can mean anything.

The physical examination, as we might expect in most of these conditions, with the exception of cancer, is of little help. Certainly, ulcer and gastritis cannot be diagnosed on the basis of physical examination. I am very much puzzled about the mass described here. It was 6 by 8 cm. in the right upper quadrant. Does it have anything to do with the diagnosis? Is it a clue, or is it a bit of information that has nothing to do with the case and is a red herring? For the time being, I am going to disregard that mass.

Dr. Mallory: Perhaps Dr. Donaldson would be able to give some information about that.

Dr. Gordon A. Donaldson: The finding is more prominent in the history than it actually was.

Dr. Culver: I was going to ask whether the X-Ray Department could see it.

Dr. Donaldson: I never felt it. It was a rather vague, indefinite mass.

Dr. Culver: I will dismiss it as of no consequence. The laboratory tests were those of marked blood loss, as one would expect. The prothrombin time of 57 per cent was not in the range that is usually considered low enough for bleeding; a prothrombin time of about 20 per cent is the critical level. A prothrombin time below this level is often a factor in prolonged bleeding. We do not have information suggestive of other blood dyscrasias or of disturbances in the clotting or bleeding mechanism. I am inclined to think that such conditions are not involved in this case. A prothrombin level of 57 per cent may indicate that the diet is not quite adequate in vitamin K or that the liver lacks the power to manufacture prothrombin. Have we anything to indicate what the prothrombin time was after Hykinone administration? Is there more information about studies of liver function? They are more of academic interest and do not contribute to the differential diagnosis. The nonprotein nitrogen of 78 mg. per 100 cc. with an apparently normal kidney function leads me to believe that this azotemia was not due to renal failure, and that uremia was not playing a role in the cause of bleeding. The elevated nonprotein nitrogen was due probably to dehydration plus blood in the bowel. In this case, we have to depend upon the x-ray films, possibly gastroscopy, and, finally, an exploratory laparotomy. Review of the x-ray films is the next obvious move.

Dr. Stanley M. Wyman: All the films we have were taken on the original examination. They are spot films. The patient was very sick, and we were not able to keep him in the department long enough to take conventional large films. The esophagus, however, is well seen and appears normal. There is a definite suggestion of a hiatus hernia on at least one spot film. The stomach itself is not entirely visualized, but on these two films the gastric folds are seen to be more prominent than usual in a diffuse manner.

Dr. Culver: Would you want to say that widening of gastric folds is consistent with the diagnosis of chronic hypertrophic gastritis? Is the widening marked enough for that?

Dr. Wyman: I do not believe we can make that diagnosis with any degree of certainty. We have seen the same picture in a patient with atrophic gastritis proved by gastroscopy. The mucosa was parchment thin, and yet the picture was identical with this. This is what one sees with hypertrophic gastritis, but I do not believe such a diagnosis

can be made with certainty. The duodenal cap is only partially visualized, and I can make no definite statement about it. I do not see a crater. All in all, the examination is very incomplete of necessity. I think it leaves many questions completely unanswered.

DR. CULVER: I think it helps in ruling out esophageal varices. It helps us to eliminate cancer of the stomach and gastric ulcer. Would you agree to that?

DR. WYMAN: And it reveals the hiatus hernia.

DR. CULVER: Yes, that is an important bit of information and one that I should have considered in the differential diagnosis of things that might cause symptoms in the epigastrium. There is no mention that lying down made the symptoms of indigestion worse than sitting up.

From the x-ray films I think we are still in the dark about the cause. We obviously could not rule out ulcer completely by gastroscopy because the patient was too ill for such a procedure.

I take it that the third form of further diagnostic measure was necessitated as an emergency procedure. At exploration, if I may project myself into the mind of the surgeon, he may or may not have found a scarred duodenal cap. I suspect that he did not, and considered that there was hemorrhage from the stomach. I do not know what he saw when he opened the stomach, but perhaps he found a diffusely inflamed stomach with no definite bleeding point but with a generalized ooze consistent with the type of bleeding seen in gastritis. The usual treatment for gastritis that causes massive bleeding, and these patients can bleed massively, is a subtotal gastrectomy.

The possibility of some obscure cause of bleeding has to be considered here. One thing may be gastric varices. There is nothing to help make that diagnosis. Gastric varices can occasionally occur without esophageal varices. Another rarity is telangiectasia involving the stomach, with bleeding from a telangiectasis. This man was too old. There was no history and no suggestion of telangiectasis on physical examination. We can forget that.

We can come back again to gastritis or ulcer. There is the possibility of bleeding gastritis in the hiatus hernia, and sometimes hiatus hernia can become strangulated. The resulting congestion causes it to bleed. The patient had an operation, and then he started to ooze on the second postoperative day and continued to ooze. That makes me think, more and more, that the lesion was probably in the remaining portion of the stomach as well as in that portion of the stomach resected. Was this continued bleeding arterial in type? Arterial bleeding, such as that from a bleeding ulcer, should be massive, and it ceases as the artery contracts. In this case the continuous bleeding makes me suspect the capillary type, which would be consistent with gastritis in the remnant of stomach, possibly in a portion of stomach caught in the hiatus hernia.

There is one other possibility, and I am sure it entered the surgeon's mind on the sixth postoperative day when the patient had a massive hematemesis. It is the possibility of a suture sloughing off an artery with a hemorrhage from that source. It is something to be considered, and I suppose the surgeon might want to look for that.

Finally, if there were an ulcer and a subtotal gastrectomy did not include the ulcer, I suppose there could be further oozing and massive hemorrhage from that source. Such a possibility seems unlikely, or the surgeon would have done something other than a subtotal gastrectomy for this ulcer when the patient was bleeding.

The most likely diagnosis is hemorrhage from gastritis in the gastric remnant. I doubt if the mass described in the protocol was ever found.

DR. DANIEL S. ELLIS: Do we know what was found at the time of the first operation?

DR. DONALDSON: This patient was on the wards for about ten days and called forth a tremendous amount of effort on the part of the House Staff. He was given twenty-five or thirty transfusions. The excuse for not having more adequate laboratory studies was that at each turn our hand was forced because of the bleeding. The first gastrointestinal series was done on a Sunday morning in an attempt to find a bleeding point. Our diagnosis before the first operation was gastritis. Gastritis causes about 5 per cent of massive hemorrhage in this hospital. We were also worried about the definite hiatus hernia and the questionable duodenal defect as shown in the x-ray picture.

At the time of operation there was a great deal of old blood in the small bowel. The duodenum did have a scar on the anterior wall just beyond the pylorus. The stomach, itself, was somewhat thickened. There was a definite hiatus hernia. With these findings we thought that our preoperative diagnosis was probably still right. We went ahead and did a subtotal gastrectomy. At the time the upper segment of stomach was explored, the clamp was removed, and with retractors in place we were able to look and feel around inside. The mucosa was thickened, and the rugae were coarse. We could find no bleeding point. No blood was found in the segment at that time, and we still thought that we were dealing with gastritis — and so completed the operation.

One unusual fact that was noted by the men at the table was that the arteries were unusually arteriosclerotic — the gastroduodenal particularly. The second operation was forced on us by the subsequent massive hemorrhage.

DR. ELLIS: Did you resect the scar?

DR. DONALDSON: Yes; it was just beyond the pylorus on the anterior wall and was resected. When the subsequent massive hemorrhage occurred,

the patient was in such straits from blood loss that we attempted to control the bleeding by placing a balloon in the stomach segment and by applying traction on the end of the tube as it escaped from his nose. We thought we had stopped the hemorrhage long enough to allow us to operate on him. This led us to believe that the bleeding came from the hiatus hernia or nearby, certainly. He was taken to the operating room in this condition, and exploration was carried out through the chest. There were no varices on the gastric wall, and again the arteries were noted to be unusually sclerotic — the left gastroepiploic and the left gastric itself. We did not open the stomach, but went ahead and took out the remnant and anastomosed the esophagus to the jejunum, taking down our previous resection.

DR. MALLORY: Have you any further opinion, Dr. Culver?

DR. CULVER: I think it still has to be gastritis but I am probably wrong.

DR. ELLIS: Would you consider the possibility of stomal ulcer in six days?

DR. CULVER: It was too soon for a stomal ulcer, which usually develops in four or five weeks. With the history of arteriosclerosis as striking as Dr. Donaldson suggests, I am more inclined to think of the possibility of a ligature eroding through a blood vessel and causing bleeding.

DR. DONALDSON: That is a good possibility and we considered it. The fact that the balloon stopped the bleeding made us feel better about it.

DR. CULVER: I still think it was gastritis.

CLINICAL DIAGNOSES

Gastric hemorrhage from arteriosclerotic vessel.
Subtotal gastrectomy.
Resection of gastric remnant.

DR. CULVER'S DIAGNOSES

Gastritis.
Gastric artery eroded by ligature.

ANATOMICAL DIAGNOSIS

Cirsoid aneurysm of branch of left gastroepiploic artery, with rupture and massive hemorrhage.

PATHOLOGICAL DISCUSSION

DR. MALLORY: In the second resected specimen we found a very definite bleeding point (Fig. 1). The first specimen showed only mild gastritis. This is the second, showing that the mucous membrane is shallowly eroded, but the erosion extends into the wall of a large sclerotic artery. There is a fresh thrombus at the point of erosion. Even in this very small section, not much more than a cm. in length, the artery has been cut across four different times, indicating that it was very tortuous and must be classified as an arteriosclerotic cirsoid aneurysm. This is not an extremely rare source of massive gastric hemorrhage. This is, I believe, the third case that we have had with essentially the same picture.

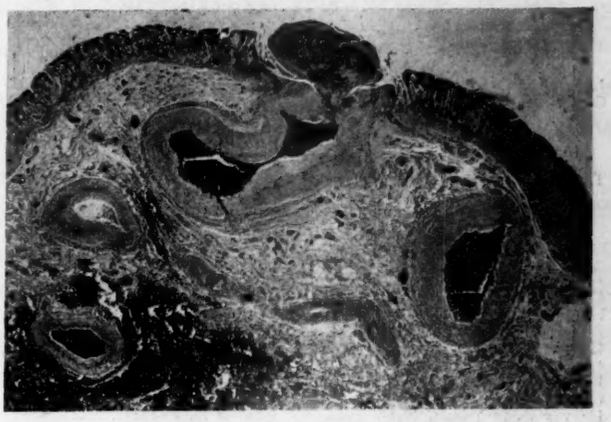

FIGURE 1.

A PHYSICIAN: Where in the stomach was it located?

DR. MALLORY: Close to the lesser curvature.

DR. DONALDSON: In retrospect, I would like to ask if gastritis would cause hemorrhage without any previous bleeding of a mild nature. We thought afterward that it might have helped.

DR. CULVER: Four cases were reviewed by Dr. Fairlie last spring. All 4 patients bled massively, and no explanation other than gastritis was found. Some bled fairly acutely. In each of these, some other cause may have been missed. I think the whole problem of diagnosis of gastritis and the significance of gastritis is still open to question. But on the basis of experience, I would say that perhaps it could cause hemorrhage, as in this case.

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MAN VERSUS THE GOOD EARTH

THE REVEREND THOMAS MALTHUS died suddenly of heart disease at sixty-eight a little over a hundred years ago. He was much abused, though a gentle character personally, because of his ominous warning that "population has a tendency to increase faster than food." The fear of world-wide hunger, however remote, has been present ever since. Neo-Malthusians can point to the threefold increase in world population in the past hundred years (at the moment, possibly at the rate of 20,000,000 a year), and to the 1,000,000,000 underfed of the earth's 2,250,000,000 people. Here in the United States although the divorce rate and the fertility per family are viewed with alarm and worry about letting in or keeping out displaced persons and disagreement about birth control are widespread, the Government has been aggressively wooing the friendship and seeking to influence a man and a nation with a real population problem. If Nehru's India continues to increase its present 355,000,000 at a rate of several million a year, its problem will be that of the United States as well, to say nothing of a 12,000,000 increase in the European population despite an estimated total war loss of 30,000,000. Furthermore world-wide sanitation, production of new and better antibiotics and new antimalarial drugs are eliminating "nature's pruning hooks."

Some astonishing and somewhat unpleasant facts are submitted by Calder* in a British country newspaper. The British are strictly dependent upon food from overseas and are therefore properly concerned about wastage anywhere, whether in Africa or Australia or the United States. The famous methods of production of this country are, in some agricultural cases, infamous methods of waste: " . . . soil unbroken for a thousand years in Oklahoma was lost in a single generation." Americans are chagrined to be reminded of their erosion problem and its absence in countries intensively cultivated for generations. It is chastening to learn, moreover, that a British farmer can get twice as much wheat from an acre as an American farmer and four times as much as an Australian. For the American and for the Australian the problem is too few persons on the land. Erosion is not "due to overworking but to undernursing." In India, where the problem is too many on the land, the anticipated industrialization will draw people from the land and not only offer but also demand modern methods of intensive cultivation and conservation since modern medicine and sanitation are committed to increase the life expectancy at birth in Eastern countries, which is now only half that in the United States.

Medical scientists need to familiarize themselves with some new terms, such as "biotic potential" (soil yield in terms of living growth for the use or comfort of man) and "environmental resistance" (unfavorable climate or man's abuses, or both). As world citizens, Americans applaud the Nobel committee for its award of the peace prize to John

*Calder, R. World food resources. *The Field*, London, August 27, 1949.

Boyd Orr, the distinguished Scottish agricultural economist. He is reported as one of those "who say that with science and common sense the world could feed twice and twice again, its present population." Perhaps, as Calder hopefully adds, if biotic potential can be made to match environmental resistance, "the world can nourish, clothe, and house as many people as the human race can produce." Should this end be achieved, men of Lord Orr's stamp will be needed since, aside from guiding the United Nations Food and Agricultural Organization, he is head of the World Federalists.

PILOT CLINIC

SEVEN months ago, when the principle of the health-protection clinic was first discussed in these pages, the proposition was looked upon in various quarters with considerable doubt and some disfavor. Even such specific and circumscribed propositions as cancer-detection clinics were encountering heavy weather in their efforts toward general acceptance, and the combining of isolated screening procedures so that they could be done on the same patient in one place and at the same time seemed altogether too radical.

The acceptance of pilot studies that might at least explore the debated area seemed not too wide an entering wedge, however, and so it was voted by the Council of the Society at its annual meeting on May 23. The progress that has been made in the short time elapsed since then speaks for the alacrity with which the able subcommittee on pilot clinics has acted, and the interest shown in the proposal by other agencies.

A preliminary report of the subcommittee appears in the Massachusetts Medical Society column in this issue of the *Journal*. A first "multiphasic screening clinic," to employ the somewhat redundant terminology offered by science, has already been established at the New England Center Hospital, and a trial run to break in the machinery has just been completed. As New Year, 1950, fades into history, the bona fide test of the clinic will begin.

SCHOOL PHYSICIANS MOBILIZE

ACTING on the time-tested principle that "united we stand," and having read the writing on the blackboard, the school physicians of Massachusetts have banded themselves together into their own organization. Such a union is long overdue and in the very nature of its purposes is a praiseworthy undertaking.

Formed in order "to work for the betterment of school health services, to encourage the meeting together of school physicians in Massachusetts, to exchange experiences and to discuss problems pertaining to any phase of school health service, and to promote a better understanding between the school physicians and the community," the Association cannot but add dignity and prestige to a very vital medical responsibility.

Obviously only a small percentage of school physicians are employed on a full-time basis; in most communities part-time service is all that is required or needed. All the more necessary is it for the school physician, then, to look upon this segment of his activities not as a pot-boiling auxiliary appendix to his major income-producing labors, indifferently accepted and grudgingly discharged, but as a specialized and valuable department of practice.

It is understandably hard to eradicate from the medical mind, filled with the traditions of the physician as one devoting many and long hours to the care of the sick, the idea of bedside practice as his only really noble function. The austerity of medical science came early to share this admiration, but public-health practice in its various aspects, and administrative and industrial medicine have been more slowly accepted as suitable fields wherein the first-class doctor might deploy his talents.

The nation is undoubtedly interested in the improvement of school health services, and so long as the Association of School Physicians of Massachusetts (itself in its infancy) whole-heartedly follows this single aim, its members will find themselves engaged in a specialty that commands universal respect.

POLIOMYELITIS FUNDS DIMINISHED

A RECENT communication from The National Foundation for Infantile Paralysis, Inc., calls attention to the mounting costs of hospital care for the victims of this disease and the critical state that the financial burden to the Foundation has reached.

This situation has been brought to a head by the epidemic of 1949, as a result of which, for the first time in its eleven years of existence, the Foundation found it necessary to conduct a not altogether successful emergency drive for funds.

Despite the Foundation's continuing support of research and education, the payment for medical care to patients is its greatest expense, and this expense is particularly for hospitalization. Practicing physicians are consequently urged to care for patients with abortive, nonparalytic and mildly paralytic cases in the home, and to avoid prolonged hospitalization for the others. Funds for the "free" care of poliomyelitis patients are low, the dimes will not march again until February, and unnecessary expenses must be avoided.

Messrs. Editors, — By the bearer we send you a specimen of diseased lung, which you may call encysted tubercle, osseous composition, or any other name your sense of propriety may dictate, after examining it.

Boston M. & S. J., *December 5, 1849*

MASSACHUSETTS MEDICAL SOCIETY

COMMITTEE ON PILOT CLINICS

At the annual meeting of the Council of the Society held on May 23, 1949, a motion submitted by the Committee on Public Health approving the establishment in the Commonwealth of not more than five pilot health-protection clinics was adopted. It was further recommended that a subcommittee of the Committee on Public Health be appointed to develop and carry out such a program. This subcommittee was accordingly appointed, consisting of a representative from each of the 18 district medical societies under the chairmanship of Dr. John J. Poutas.

The subcommittee and its executive committee have subsequently held several meetings, with the following results.

The decision has been made to develop a single initial pilot health-protection or "multiphasic screening" clinic. This clinic has been set up at the New England Center and the Joseph H. Pratt Diagnostic Hospital. A local project committee has been established to determine local problems, and a central guiding committee has been set up to act in an advisory capacity.

Dr. Claire F. Ryder, of the Massachusetts Department of Public Health, has been appointed as administrator of the clinic.

It has been decided that, to perform its functions satisfactorily, the Clinic should run for approximately six months, operating four times a week. During this period it should be possible to examine 2000 to 3000 persons, a number that would constitute an impressive sample.

The proposed budget for such a clinic, including adequate pay for the participating personnel, will be $31,000. The United States Public Health Service will consider this a co-operating clinic and will supply funds to be paid directly to the persons employed in the clinic up to an amount not exceeding $15,000. Approximately $12,000 is available through the services and funds of the Massachusetts Department of Public Health, and the remainder is to be raised from the voluntary agencies that have indicated their desire to participate.

Already, since the first of December, a trial run of approximately 100 personnel of the Department of Public Health has been made, extending through four clinic periods, without utilizing any of the funds earmarked for the actual clinic operation, which will begin after the New Year.

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

COMMUNICABLE DISEASES IN MASSACHUSETTS FOR OCTOBER, 1949

RÉSUMÉ

DISEASES	OCTOBER 1949	OCTOBER 1948	SEVEN-YEAR MEDIAN
Chancroid	0	2	2*
Chicken pox	307	622	370
Diphtheria	12	28	19
Dog bite	891	739	812
Dysentery, bacillary	15	5	32
German measles	39	47	52
Gonorrhea	221	284	413
Granuloma inguinale	0	1	1*
Lymphogranuloma venereum	0	1	1*
Malaria	1	1	16
Measles	107	660	508
Meningitis, meningococcal	4	6	11
Meningitis, Pfeiffer-bacillus	1	3	3
Meningitis, pneumococcal	0	2	2
Meningitis, staphylococcal	0	0	0
Meningitis, streptococcal	0	0	0
Meningitis, undetermined	8	7	3
Mumps	210	485	350
Poliomyelitis	244	31	65
Salmonellosis	24	7	13
Scarlet fever	113	243	372
Syphilis	132	141	390
Tuberculosis, pulmonary	148	171	230
Tuberculosis, other forms	7	11	16
Typhoid fever	1	2	3
Undulant fever	3	2	3
Whooping cough	314	180	460

*Five-year median.

Comment

The only diseases above the seven-year median for October were poliomyelitis and salmonellosis.

Diseases below the seven-year median included chicken pox, diphtheria, bacillary dysentery, German measles, measles, mumps, scarlet fever and whooping cough.

Although the incidence of poliomyelitis dropped markedly from the high figures for August and September, cases were at the third highest ever reported in October.

Twenty-four cases of salmonellosis this month was the highest ever recorded in October, but in August this year there were 74 cases.

For the second consecutive month, measles was at the lowest level since 1937.

For the fourth consecutive month, scarlet fever was at the lowest level ever recorded.

Although whooping cough was still below the seven-year median, this was the seventh successive month in which more cases were reported than in the corresponding month in 1948.

Geographical Distribution of Certain Diseases

Diphtheria was reported from: Boston 7; Burlington, 1; Rockport, 1; Somerville, 2; Watertown, 1; total, 12.

Dysentery, bacillary, was reported from: Boston, 7; Cambridge, 7; Wrentham, 1; total, 15.

Encephalitis, infectious, was reported from: Newburyport, 1; Springfield, 1; total, 2.

Infectious hepatitis was reported from: Lawrence, 3; total 3.

Malaria was reported from: Gloucester, 1; total, 1.

Meningitis, meningococcal, was reported from: Boston, 1; Haverhill, 1; Maynard, 1; Peabody, 1; total, 4.

Meningitis, Pfeiffer-bacillus, was reported from: Attleboro, 1; total, 1.

Meningitis, undetermined, was reported from: Boston, 2; Chelmsford, 1; Fall River, 4; Medford, 1; total, 8.

Poliomyelitis was reported from: Abington, 3; Adams, 2; Arlington, 3; Attleboro, 3; Auburn, 1; Barre, 2; Belmont, 1; Beverly, 1; Billerica, 2; Boston, 27; Braintree, 3; Bridgewater, 1; Brockton, 1; Brookline, 3; Burlington, 1; Cambridge, 3; Chelmsford, 1; Chelsea, 3; Chicopee, 1; Dedham, 1; Deerfield, 2; Dennis, 1; Dover, 1; Dracut, 2; Duxbury, 1; East Bridgewater, 1; Fall River, 3; Falmouth, 1; Framingham, 6; Franklin, 1; Gardner, 1; Great Barrington, 1; Hampden, 1; Hanover, 1; Haverhill, 2; Hingham, 1; Hinsdale, 1; Holbrook, 1; Holliston, 3; Hudson, 2; Lawrence, 1; Lee, 1; Leominster, 2; Longmeadow, 1; Lynn, 12; Lynnfield, 2; Malden, 3; Mansfield, 2; Marblehead, 1; Marshfield, 2; Mattapoisett, 2; Medford, 7; Melrose, 3; Middleboro, 1; Milford, 3; Millville, 1; Nantucket, 1; Natick, 1; Needham, 2; New Bedford, 6; Newburyport, 1; Newton, 8; North Adams, 1; North Attleboro, 1; Palmer, 1; Pittsfield, 3; Plainville, 1; Quincy, 5; Reading, 4; Rehoboth, 1; Revere, 3; Salem, 4; Salisbury, 1; Saugus, 1; Scituate, 1; Sharon, 1; Somerville, 5; Southboro, 2; Springfield, 3; Sterling, 3; Stoughton, 1; Swampscott, 1; Swansea, 1; Taunton, 2; Templeton, 1; Topsfield, 1; Walpole, 2; Waltham, 5; Watertown, 3; Webster, 1; Wellesley, 6; Weymouth, 4; Whitman, 1; Williamstown, 2; Wilmington, 1; Winchendon, 5; Winchester, 1; Winthrop, 2; Worcester, 4; total, 244.

Salmonellosis was reported from: Amesbury, 2; Andover, 2; Boston, 8; Cambridge, 1; Everett, 1; Haverhill, 3; Lowell, 3; Malden, 2; Newton, 1; Salem, 1; total, 24.

Septic sore throat was reported from: Boston, 2; Lynn, 1; Medford, 1; Westford, 1; total, 5.

Trichinosis was reported from: Boston, 1; Cambridge, 3; Fitchburg, 1; Natick, 1; total, 6.

Tularemia was reported from: Chilmark, 1; total, 1.

Typhoid fever was reported from: Somerville, 1; total, 1.

Undulant fever was reported from: Agawam, 1; Lincoln, 1; Pepperell, 1; total, 3.

CORRESPONDENCE

MAINE MARITIME ACADEMY CRUISE

To the Editor: Last year about this time I wrote to you for assistance in obtaining a medical officer for the annual cruise of the "American Sailor," training vessel for the Maine Maritime Academy. We are again making a cruise during the winter months to the Caribbean and Gulf of Mexico and are in need of a doctor. Therefore, I am writing to request that you inform your readers of this opportunity for a cruise under very pleasant circumstances. For your ready information I will repeat the substance of my letter of last year which is also applicable now:

> The training ship is provided by the United States Maritime Commission and is a very comfortable 400-foot steamer equipped as a training vessel with excellent medical equipment on board. Embarked will be the cadets, faculty and staff of the Academy, amounting to 220 persons. It has been the custom in the past to employ a doctor for this cruise, which is tantamount to a vacation for him, owing to the fact that all persons on board are in excellent physical condition. However, we do desire a doctor on board in case of emergencies.
>
> The pay is $330 a month plus maintenance.

The cruise begins on January 12 and ends on March 26, 1950.

W. W. Warlick
Rear Admiral USN (Ret.)
Superintendent

Maine Maritime Academy
Castine, Maine

BOOK REVIEW

The Basic Neurosis: Oral regression and psychic masochism. By Edmund Bergler, M.D. 8°, cloth, 353 pp. New York: Grune and Stratton, Incorporated, 1949. $5.00.

Dr. Bergler, a Freudian psychoanalyst, and a prolific psychoanalytic writer, is well known among psychiatric circles by his papers and books dealing with common sexual problems and their influence on human behavior.

In his most recent work, Dr. Bergler has attempted to demonstrate why he believes that all neuroses, if adequately examined and interpreted, will reveal the basic structure of oral regression and psychic masochism. Approximately the first half of the book is groundwork outlining concepts that are presented in the form of clinical pictures in the last half.

The author evidently assumes that the reader is familiar with basic psychoanalytic concepts and tenets because he immediately launches into his writing with terminology that is not necessarily basic. Also the use of the personal pronoun "I," especially in comparison with the name of Dr. Freud, appears to be a bit overdone to have the book in truly good taste.

In the chapter, "Orality and the Myth of the Superior Male," Dr. Bergler appears to have been provoked by editors, publishers and so forth, to whom he variously refers as neurotics of one form or another. This is evidently a contradiction and places him in the neurotic, easily provoked group as indicated from his table entitled "The Nine Point Basis of Every Neurosis" in the third chapter. To clarify this point further it is obvious that the author has used the fifth chapter as a direct retort to the people mentioned above, who obviously provoked aggression and disturbed his ego functioning. This chapter, in its present form, could have been, from the reader's standpoint, profitably omitted.

Aside from these criticisms the book is an excellent presentation of the mechanisms of orality and their influence on personality development.

BOOKS RECEIVED

The receipt of the following books is acknowledged, and this listing must be regarded as a sufficient return for the courtesy of the sender. Books that appear to be of particular interest will be reviewed as space permits. Additional information in regard to all listed books will be gladly furnished on request.

Pain Syndromes: Treatment by paravertebral nerve block. By Bernard Judovich, M.D., instructor in neurology, University of Pennsylvania School of Medicine, and physician-in-charge, Neuralgia Clinic, Graduate Hospital, Philadelphia; and William Bates, M.D., professor of surgery, University of Pennsylvania School of Medicine, consulting surgeon, Babies' Hospital and Philadelphia Home for Incurables, and

consulting general surgeon, Wills Hospital, Philadelphia. With a foreword by Joseph C. Yaskin, M.D., professor of neurology, University of Pennsylvania School of Medicine. Third edition. 8°, cloth, 357 pp., with 181 illustrations. Philadelphia: F. A. Davis Company, 1949. $6.00.

This third edition of a special monograph, formerly called *Segmental Neuralgia in Painful Syndromes*, has been thoroughly revised, and material added on endometriosis as a cause of major backache, the intravenous use of procaine as a method of pain control, technic for aborting attacks of migraine and atypical facial pain. The chapter on brachial-plexus pain has been enlarged by the inclusion of a new summary of etiologic factors, a new outline of etiologic factors and a differential method of examination. The chapter on the anterior-scalene syndrome has been thoroughly revised. The book is well published and should be in all medical libraries and available to neurologists and physicians interested in the subject of pain.

The Venereal Diseases: A manual for practitioners and students. By James Marshall, M.D., M.R.C.S., L.R.C.P., director, Venereal Diseases Clinic, Royal Northern Hospital, London, and consulting dermatologist, Central Middlesex County Hospital. Second edition. 8°, cloth, 369 pp., with 105 illustrations. London: Macmillan and Company Limited, 1948. $5.50.

In this second edition of a manual first published in 1944 the author has incorporated the use of penicillin, rewritten the sections on nongonococcal urethritis, brought up to date massive arsenotherapy, added a note on Reiter's syndrome and made many minor revisions and corrections. The book is well published, and there is a good index. The volume should prove valuable as a quick reference source.

Safeguarding Motherhood. By Sol T. DeLee, M.D., clinical instructor of obstetrics and gynecology, University of Illinois College of Medicine, and attending obstetrician at the Chicago Maternity Center. 8°, cloth, 135 pp., with 42 illustrations. Philadelphia: J. B. Lippincott Company, 1949. $2.00.

This manual for expectant mothers has been written by an obstetrician. The chief purposes of the book are to inform them regarding their pregnant condition, the means whereby the body has been prepared for it, the course it will follow and the culmination in the birth of the child. It is to be used in co-operation with an obstetrician. There is a glossary of uncommon and technical words and phrases used in the text. There is a good index. The publishers have produced a beautiful book with excellent illustrations.

Etudes de pathologie foetale et néonatale. By Dr. M. Sorba. 8°, paper, 160 pp., with 14 illustrations. Lausanne: F. Rouge & Cie S. A., 1948.

In this monograph Dr. Sorba discusses the various aspects of fetal neonatal pathology. The text is divided into four parts: lesions of the fetal annexes and the fetus; interpretation of the lesions and syndromes; causes and mechanisms of death; and fetal and neonatal pathology. A bibliography concludes the text. A table of contents takes the place of an index. The monograph is well published and should prove of interest to persons interested in the subject.

Clinical Case-Taking: Guides for the study of patients. History-taking and physical examination or semiology of disease in the various systems. By George R. Herrmann, M.D., Ph.D., professor of medicine, University of Texas Medical Branch. Fourth edition. 8°, cloth, 240 pp. St. Louis: C. V. Mosby Company, 1949. $3.50.

This manual was first published in 1927 and has been revised and brought up to date. It is intended for ward and bedside practice. The method of interviewing patients — to establish what sort of a human being each one is — has been added in the general outline for all cases, as well as in the section on psychiatry. The significance of personality functions as motivating factors in psychosomatic disorders has been pointed out. There are new sections on pediatrics and surgical case study. The table of contents has been arranged as a working outline, and there is a good index. The book is well published.

NOTICES

HARVARD MEDICAL SOCIETY

A meeting of the Harvard Medical Society will be held in the Lower Outpatient Amphitheater, Massachusetts General Hospital, on Tuesday, December 13, at 8 p.m.

PROGRAM

Spatial Relationships of the Deep Veins of the Lower Extremity. Davitt A. Felder.
Venous Pressures in the Lower Extremity. Richard Warren.
Management of Late Phlebitic Sequelae. Irad B. Hardy, Jr.
Problems in the Management of Portal Hypertension. Robert R. Linton.

GREATER BOSTON MEDICAL SOCIETY

A meeting of the Greater Boston Medical Society will be held in the auditorium of the Beth Israel Hospital on Thursday, December 15, at 8:15 p.m. A symposium on early diagnosis of cancer will be conducted, with Dr. Arnold M. Seligman as moderator. Dr. Monroe J. Schlesinger will discuss "Histopathologic Diagnosis," Dr. Olive Gates "Aspects of Cytologic Diagnosis," Dr. William Fishman "Biochemical and Enzymatic Diagnosis," and Dr. Freddy Homburger "Evaluation of Cancer Tests."

BOSTON CITY HOSPITAL HOUSE OFFICERS' ASSOCIATION

A Tuesday evening lecture sponsored by the Boston City Hospital House Officers' Association will be presented in the Dowling Amphitheater, Boston City Hospital, on December 20 at 7 p.m. Dr. Ephraim Shorr of the New York Hospital and Cornell University Medical College will speak on the subject "The Role of Vasoactive Principles of Liver and Kidney Origin in Experimental Shock, Hypertension and Cirrhosis."

All interested physicians are invited to attend.

NEW ENGLAND SOCIETY OF PHYSICAL MEDICINE

A regular meeting of the New England Society of Physical Medicine will be held at the Hotel Kenmore, Boston, on Wednesday, December 14, at 8:00 p.m. Dr. Stanley J. Sarnoff will speak on the subject "Electrophrenic Respiration with Consideration of the Management of the Respirator Difficulties in Bulbar Poliomyelitis" (with motion pictures, slides and demonstrations of electrophrenic respirator technics). This will be followed by a general discussion.

There will be a meeting of the Council at 7:30 after an informal dinner in the Empire Room at 6:00 p.m.

Physicians, physical therapists, occupational therapists and corrective therapists are cordially invited to attend this program.

ASSOCIATION OF SCHOOL PHYSICIANS OF MASSACHUSETTS

A dinner meeting of the Association of School Physicians of Massachusetts, which will also be a membership and organizational meeting, will be held at the Pocahontas Club, Lynnfield, on Wednesday, December 21, at 6:30 p.m. The speakers will be Dr. William E. Welch, superintendent of schools in Peabody, and president of the Association of School Superintendents of Massachusetts, and Dr. William M. Schmidt, associate professor of maternal and child health practice, Harvard School of Public Health, who will discuss his postwar experiences in Europe.

LABORATORY COURSES AT COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA

A schedule of laboratory training courses will be offered at the Communicable Disease Center, Laboratory Division, Atlanta, Georgia, from January 9 to December 1, 1950. Application forms and further information regarding the subjects, duration and location of the various courses may be obtained from the Chief, Laboratory Division, Communicable Disease Center, 291 Peachtree Street, N. E., Atlanta, Georgia.

(*Notices concluded on page xiii*)